



Product Manual



RAPD (Random Amplified Polymorphic DNA's)
Gene Mapping, Polymorphism, DNA fingerprinting
AFLP(Amplified Fragment Length Polymorphism)

Gene Detection System

GL RAPD Decamer Sets

Catalog No. 40-0001-XX

Arbitrary sequence decamer sets for rapid discerning of DNA polymorphism. There are 30 sets available, each containing 40 primers with 60-70% GC content. These primers are used in amplification reactions for determining Random Amplified Polymorphic DNA (RAPD) fragments.

GL RAPD Decamer Sets

GL RAPD Decamer Set 1-30

Catalog No: 40-0001-00

Shipped at ambient temperature. Store at -20°C**For research use only****Not for use in diagnostic procedures for clinical purposes.**

Set Contents

Arbitrary sequence decamer sets for rapid discerning of DNA polymorphism. There are 30 sets available each containing 40 primers with a 60-70% GC content. These primers are used in amplification reactions for determining Random Amplified Polymorphic DNA (RAPD) fragments.

Each tube contains 10 nmols of lyophilized primer. This is sufficient for thousands of amplification reaction. Please see Protocol section for details.

Thirty decamer sets listed below are available. Primer Data Sheet for each set is given in the Appendix and supplied with the product.

	Catalog No	Product Name
<input type="checkbox"/>	40-0001-01	GL RAPD Decamer 01-AB Set
<input type="checkbox"/>	40-0001-02	GL RAPD Decamer 02-CD Set
<input type="checkbox"/>	40-0001-03	GL RAPD Decamer 03-EF Set
<input type="checkbox"/>	40-0001-04	GL RAPD Decamer 04-GH Set
<input type="checkbox"/>	40-0001-05	GL RAPD Decamer 05-IJ Set
<input type="checkbox"/>	40-0001-06	GL RAPD Decamer 06-KL Set
<input type="checkbox"/>	40-0001-07	GL RAPD Decamer 07-MN Set
<input type="checkbox"/>	40-0001-08	GL RAPD Decamer 08-OP Set
<input type="checkbox"/>	40-0001-09	GL RAPD Decamer 09-QR Set
<input type="checkbox"/>	40-0001-10	GL RAPD Decamer 10-ST Set
<input type="checkbox"/>	40-0001-11	GL RAPD Decamer 11-UV Set
<input type="checkbox"/>	40-0001-12	GL RAPD Decamer 12-WX Set
<input type="checkbox"/>	40-0001-13	GL RAPD Decamer 13-YZ Set
<input type="checkbox"/>	40-0001-14	GL RAPD Decamer 14-AAAB Set
<input type="checkbox"/>	40-0001-15	GL RAPD Decamer 15-ACAD Set

	Catalog No	Product Name
<input type="checkbox"/>	40-0001-16	GL RAPD Decamer 16-AEAF Set
<input type="checkbox"/>	40-0001-17	GL RAPD Decamer 17-AGAH Set
<input type="checkbox"/>	40-0001-18	GL RAPD Decamer 18-AIAJ Set
<input type="checkbox"/>	40-0001-19	GL RAPD Decamer 19-AKAL Set
<input type="checkbox"/>	40-0001-20	GL RAPD Decamer 20-AMAN Set
<input type="checkbox"/>	40-0001-21	GL RAPD Decamer 21-AOAP Set
<input type="checkbox"/>	40-0001-22	GL RAPD Decamer 22-AQAR Set
<input type="checkbox"/>	40-0001-23	GL RAPD Decamer 23-ASAT Set
<input type="checkbox"/>	40-0001-24	GL RAPD Decamer 24-AUAV Set
<input type="checkbox"/>	40-0001-25	GL RAPD Decamer 25-AWAX Set
<input type="checkbox"/>	40-0001-26	GL RAPD Decamer 26-AYAZ Set
<input type="checkbox"/>	40-0001-27	GL RAPD Decamer 27-BABB Set
<input type="checkbox"/>	40-0001-28	GL RAPD Decamer 28-BCBD Set
<input type="checkbox"/>	40-0001-29	GL RAPD Decamer 29-BEBF Set
<input type="checkbox"/>	40-0001-30	GL RAPD Decamer 30-BGBH Set

Background

Polymorphism

The vast amount of phenotypic differences between individuals may be either due to genetic differences-meaning differences encoded at the DNA level or due to non-genetic differences particularly dependent on environmental interaction. The condition of the existence of two or more forms of DNA sequence for a particular stretch or forms of proteins that are genetically distinct and structurally different is known as polymorphism.

Genetic Polymorphism is defined as the occurrence of multiple alleles at a locus, where at least two alleles exist with frequencies greater than 1 percent. Examples of polymorphism at the protein level a) Blood group system ABO, MNSs, Rh. b) Galactosemia, galactose-1-phosphate uridyl transferase locus. c) alpha-1-antitrypsin (1).

Polymorphisms are principally of value for their use as genetic "markers" to distinguish different inherited forms of a gene in family studies.

The human haploid genome consists of ~ 3×10^9 bases. Not all individuals have exactly the same DNA sequences. Differences in DNA sequence termed as polymorphism exists in the human population. These differences in DNA sequence may either create or abolish a site recognized by a restriction endonuclease thereby upon digestion, electrophoretic separation and southern analysis may give rise to differing hybridizing fragment lengths. DNA based variations at restriction sites detected in this manner are called **restriction fragment length polymorphism (RFLP)**. The differing fragment lengths constitute codominant alleles at a DNA locus. RFLPs may also arise from deletion or insertion of DNA, rather than from single nucleotide changes (1).

Polymerase Chain Reaction has afforded rapid progress in genetic research. Various techniques have essentially replaced the use of RFLP based analysis of polymorphism. The use of Short Tandem Repeat (STR), VNTR and microsatellite markers has generated enormous amount of polymorphic data by incorporating multi loci high throughput screening (2). The limiting factor in microsatellites is the initial generation and establishing of these markers.

A PCR based RFLP analysis is termed. Another modified approach include AFLP (Amplification fragment length polymorphism) for DNA fingerprinting (3) and genetic characterization in plants (4).

Other techniques have utilized the fact that large number of primer combination based amplification has to yield polymorphic amplified fragments. A robust random approach of using random sequence decamer primers to amplify DNA is named **RAPD (Random Amplified Polymorphic DNA, (pronounced RAPID))** (5-7).

Polymorphisms are principally of value for their use as genetic "markers" to distinguish different inherited forms of a gene in family studies. Genetic markers are of enormous practical use in medical genetics for:

- ◆ Mapping genes to individual chromosomes by linkage analysis.
- ◆ Pre-symptomatic and prenatal diagnosis of genetic disease.
- ◆ Detection of heterozygous carriers of genetic disease.
- ◆ Evaluation of high- and low-risk persons with a predisposition to common adult disorders, such as coronary heart disease, cancer, and diabetes.
- ◆ Paternity testing and forensic application.
- ◆ Matching of donor-recipient pairs for tissue and organ transplantation.

The main context of this manual is focused on human and medical genetics. The same protocols have been used for all DNA polymorphism studies and the same implications can be extended to bacterial, plant and other organisms.

RAPD Decamer Primers

Williams et al first reported the use of arbitrary sequence short primers (5). They described a new assay for DNA polymorphism based on the amplification of random DNA segments with **single** primers of arbitrary sequence. These fragments amplify from one parent DNA and not from the other, signifying Mendelian inheritance. Such polymorphism can be valuable for construction of polymorphic genetic maps (5-7).

Gene Link RAPD decamer sets include arbitrary decamers of unique sequence. The individual primers are constructed to have a GC content between 60-70% with no complementary ends to minimize primer dimers. Selected sequences representing some of the combination of unique sequence without runs are spread over 30 sets, each containing 40 primers. The total number of primers spread over 30 sets is 1200.

Probability of Polymorphic Fragments

The probability of finding these short decamer primer cognate sequences in the target DNA varies and may be numerous, such that a single primer generates multiple amplification fragments. Discerning a polymorphic site is simply based on the presence in one and absence in another of the same size fragment. Repeating the amplification *should* give the same result if it is truly polymorphic. The fragment pattern generated for a particular species DNA should be constant in reproducible experimental conditions. A primer's ability to generate amplification products is dependent on its sequence and the genome size of the template. The technique is actually based on the premise of 'randomness'; the primers finding its complementary sequence randomly and possibly fortuitously polymorphic and not present in the 'other' template.

Probability calculation of the frequency of a decamer predicts between 5-10 in a genome size of 2×10^9 base pairs. Smaller genome size still generates amplification products, possibly due to mismatch miss-priming.

Nomenclature of Amplified Fragment

Gene Link RAPD decamer sets follow the same numbering pattern adopted by Operon. The similar numbering will assist customers with a universal numbering system. The primer sets are named using letters and the individual primers are named using numerals. Gene Link recommends using the convention of Paran et al. (8). Use the primer name followed by polymorphic fragment size as the suffix.

Protocol

Gene Link decamer primer sets contain 40 primers. Each tube contains 10 nmols of lyophilized primer. See protocol section below for details regarding reconstitution and use. Gene Link recommended amplification protocol given below might be different than what you may be using. It is a modified protocol with a higher annealing temperature (9). We advise you to follow the protocol already established in your laboratory. As with all initial experiments, we suggest aggressive optimization of reaction conditions and the following protocol be used only as a guideline.

Gene Link recommended protocol use a higher annealing temperature between 50 °C -55°C based on a report by Atienzar et al (9). They reported that the annealing temperature avoided spurious formation of amplification products and increased the reproducibility.

Reconstitution of Primers

Gene Link recommends preparation of a stock solution of the primers to yield a concentration of 10 μM (10 pmol/μl), and a working solution of 1 μM (1 pmol/μl).

- Stock solution:** Add 1 ml of sterile water or TE to the supplied tubes containing the primers. This will yield a 10 μM (10 pmol/μl) solution.
- Working Solution:** Further 10 fold dilution to obtain a 1 μM (1 pmol/μl) solution.

PCR parameters	25 μl reaction volume
Annealing Temperature:	50 °C -55°C
Mg ⁺⁺ concentration:	3-6 mM
dNTP concentration:	0.33-0.44 μM
Primer concentration:	1.0 – 2.0 μM
Taq Polymerase:	0.1 unit/μl
Template DNA:	0.2-4 ng/μl

PCR Buffer (1X): 10 mM Tris-HCl pH 8.8, 50 mM KCl, 0.08% Nonidet P40, BSA 0.1 μg/μl

Thermal Cycling: Initial 95°C for 4 min.
39 Cycles of 95°C for 1 min.
Annealing at 50°C for 1 min.
Extension at 74°C for 1 min.
Final Cycle at 74°C for 10 min.

Electrophoresis

The amplified fragments are resolved in a 1.4% agarose gel and visualized by ethidium bromide staining. Native polyacrylamide gels have been used at Gene Link for sharp resolution of short fragments between 100-400 bp. Molecular biologists find polyacrylamide gels tedious to prepare and handle but they provide a better alternate to agarose gels for resolution of short fragments.

Results and Interpretation

Obtaining good and reliable results requires meticulous and careful experimental conditions. The template quality is of paramount importance. The DNA should be predominantly of high molecular weight with very few-sheared DNA. Highly sheared DNA may loose the polymorphic site by breakage and thus not yield informative results. Thorough consistency is required to enable reproducing useful results obtained. Due to the arbitrary nature of this technique, polymorphic fragments may not be obtained even by using all the primers under stringent conditions. Under such eventuality, it is recommended that the annealing temperature be decreased gradually.

The amplified fragment gel profile may seem daunting with numerous bands. Closer visualization should clearly reveal a pattern of presence and absence of a particular band. This should be noted as possibly polymorphic and should be reproducible. Several published reports indicate the use of RAPD markers yielding polymorphic markers from template DNA from plants, bacteria and mice (10-12).

Smeared Fragment Pattern is generally a sign of mismatched priming and excess non-stringent amplification. A smear pattern is almost always converted to distinct fragments by optimizing the concentration of the primers, annealing temperature, polymerase and the template.

Use of Multiple RAPD Primers has been shown to improve discrimination over one primer used individually. This increased discrimination is limited to profiles that already show a difference. Two virtually identical patterns obtained by using one primer indicate highly related strains and cannot be more informative by using two primers (13).

References

1. Javed, A. A., Huang, Y. and Bombard, A. T. (1995) Molecular analysis of genetic diseases. An overview for clinicians. *J. Assoc. Acad. Min. Phys.* 6:15-27.
2. Javed, A. A., Stambolian, D., and Huang, Y. (1995) The gene of Nance-Horan syndrome maps to Xp22.12. *Am. J. Hum. Genet.* 57:A194.
3. Vos, P., Hogers, R., Bleeker, M. et al. (1995) AFLP: A new technique for DNA fingerprinting. *Nucl. Acids Res.* 23: 4407-4414.
4. Ranamukhaarachchi, D. G., Kane, M.E., Guy, C.L. and Li, Q.B. (2000) Modified AFLP technique for rapid genetic characterization in plants. *Biotechniques* 29: 858-866.
5. Williams, J.G.K., Kubelik, A.R., Livak, K.J., Rafalski, J.A., and Tingey, S.V. (1990) *DNA polymorphisms amplified by arbitrary primers are useful as genetic markers*, *Nucl. Acids Res.* 18, 6531-6535.
6. Williams, J. G., Reiter, R.S., Young, R.M. and Scolnik, P.A. (1993) Genetic mapping of mutations using phenotypic pools and mapped RAPD markers. *Nucl. Acids Res.* 21:2697-2702.
7. Welsh, J. and McClelland, M. (1990) *Fingerprinting genomes using PCR with arbitrary primers*, *Nucl. Acids Res.* 19, 303-306.
8. Paran, I., Kesseli, R., and Michelmore, R. (1991) *Identification of RFLP and RAPD markers linked to downy mildew resistance genes in lettuce using near-isogenic lines*, *Genome* 34, 1021-1027.
9. Atienzer, F., Evenden, A., Jha, A., Savva, D. and Depledge, M. (2000) Optimized RAPD analysis generates high quality genomic DNA profiles at high annealing temperature. *Biotechniques* 28:52-54.
10. Martin, G.B., Williams, J.G.K., and Tanksley, S.D. (1991) *Rapid identification of markers linked to a Pseudomonas resistance gene in tomato by using random primers and near-isogenic lines*, *Proc. Natl. Acad. Sci. USA* 88, 2336-2340.
11. Reiter, R.S., Williams, J.G.K., Feldman, K.A., Rafalski, J.A., Tingey, S.V., and Scolnik, P.A. (1992) *Global and local genome mapping in Arabidopsis thaliana by using recombinant inbred lines and random amplified polymorphic DNAs*, *Proc. Natl. Acad. Sci. USA* 89, 1477-1481.
12. Woodward, S.R., Sudweeks, J., and Teuscher, C. (1992) *Random sequence oligonucleotide primers detect polymorphic DNA products which segregate in inbred strains of mice*, *Mammalian Genome* 3, 73-78.
13. Hopkins, K.L and Hilton, A.C.(2001) Use of multiple primers in RAPD analysis of clonal organisms provides limited improvement in discrimination. *Biotechniques* 30: 1262-1267.



Product Specification: Primer Data Sheet

GL RAPD Decamer 01 AB Set

Catalog No. 40-0001-01

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL DecamerA-01	CAGGCCCTTC	10	2963.97	33.6	92.8	70	10.8	31.9
2	GL DecamerA-02	TGCGGAGCTG	10	3044.01	33.6	101	70	9.9	30.1
3	GL DecamerA-03	AGTCAGCCAC	10	2996.98	29.5	107.5	60	9.3	27.9
4	GL DecamerA-04	AATCGGGCTG	10	3068.02	29.5	109	60	9.2	28.1
5	GL DecamerA-05	AGGGGTCTTG	10	3099.04	29.5	106.4	60	9.4	29.1
6	GL DecamerA-06	GGTCCCTGAC	10	3003.99	33.6	96.9	70	10.3	31
7	GL DecamerA-07	GAAACGGGTG	10	3117.04	29.5	119.8	60	8.3	26
8	GL DecamerA-08	GTGACGTAGG	10	3108.04	29.5	113.1	60	8.8	27.5
9	GL DecamerA-09	GGGTAACGCC	10	3053.01	33.6	107.7	70	9.3	28.3
10	GL DecamerA-10	GTGATCGCAG	10	3068.02	29.5	109	60	9.2	28.1
11	GL DecamerA-11	CAATCGCCGT	10	2987.98	29.5	100.8	60	9.9	29.6
12	GL DecamerA-12	TCGGCGATAG	10	3068.02	29.5	109	60	9.2	28.1
13	GL DecamerA-13	CAGCACCCAC	10	2941.95	33.6	102.1	70	9.8	28.8
14	GL DecamerA-14	TCTGTGCTGG	10	3050.02	29.5	95.6	60	10.5	31.9
15	GL DecamerA-15	TTCCGAACCC	10	2947.96	29.5	96.7	60	10.3	30.5
16	GL DecamerA-16	AGCCAGCGAA	10	3046	29.5	118.3	60	8.5	25.7
17	GL DecamerA-17	GACCGCTTGT	10	3019	29.5	98.2	60	10.2	30.7
18	GL DecamerA-18	AGGTGACCGT	10	3068.02	29.5	109	60	9.2	28.1
19	GL DecamerA-19	CAAACGTCGG	10	3037	29.5	111.6	60	9	27.2
20	GL DecamerA-20	GTTGCGATCC	10	3019	29.5	98.2	60	10.2	30.7
21	GL DecamerB-01	GTTCGCTCC	10	2969.98	29.5	87.4	60	11.4	34
22	GL DecamerB-02	TGATCCCTGG	10	3019	29.5	98.2	60	10.2	30.7
23	GL DecamerB-03	CATCCCCCTG	10	2923.95	33.6	88.7	70	11.3	33
24	GL DecamerB-04	GGACTGGAGT	10	3108.04	29.5	113.1	60	8.8	27.5
25	GL DecamerB-05	TGCGCCCTTC	10	2954.97	33.6	86.1	70	11.6	34.3
26	GL DecamerB-06	TGCTCTGCC	10	2954.97	33.6	86.1	70	11.6	34.3
27	GL DecamerB-07	GGTGACCGAG	10	3093.03	33.6	111.8	70	8.9	27.7
28	GL DecamerB-08	GTCCACACGG	10	3012.99	33.6	103.6	70	9.7	29.1
29	GL DecamerB-09	TGGGGGACTC	10	3084.03	33.6	105.1	70	9.5	29.3
30	GL DecamerB-10	CTGCTGGGAC	10	3044.01	33.6	101	70	9.9	30.1
31	GL DecamerB-11	GTAGACCCGT	10	3028	29.5	104.9	60	9.5	28.9
32	GL DecamerB-12	CCTTGACGCA	10	2987.98	29.5	100.8	60	9.9	29.6
33	GL DecamerB-13	TTCCCCCGCT	10	2914.95	33.6	82	70	12.2	35.5
34	GL DecamerB-14	TCCGCTCTGG	10	2994.99	33.6	90.2	70	11.1	33.2
35	GL DecamerB-15	GGAGGGTGT	10	3139.06	29.5	110.5	60	9	28.4
36	GL DecamerB-16	TTTGCCCGGA	10	3019	29.5	98.2	60	10.2	30.7
37	GL DecamerB-17	AGGGAACGAG	10	3126.04	29.5	126.5	60	7.9	24.7
38	GL DecamerB-18	CCACAGCAGT	10	2996.98	29.5	107.5	60	9.3	27.9
39	GL DecamerB-19	ACCCCCGAAG	10	2981.97	33.6	106.2	70	9.4	28.1
40	GL DecamerB-20	GGACCCTTAC	10	2987.98	29.5	100.8	60	9.9	29.6



Product Specification: Primer Data Sheet

GL RAPD Decamer 02 CD Set

Catalog No. 40-0001-02

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL DecamerC-01	TTCGAGCCAG	10	3028	29.5	104.9	60	9.5	28.9
2	GL DecamerC-02	GTGAGGCGTC	10	3084.03	33.6	105.1	70	9.5	29.3
3	GL DecamerC-03	GGGGGTCTTT	10	3090.04	29.5	99.7	60	10	31
4	GL DecamerC-04	CCGCATCTAC	10	2947.96	29.5	96.7	60	10.3	30.5
5	GL DecamerC-05	GATGACCGCC	10	3012.99	33.6	103.6	70	9.7	29.1
6	GL DecamerC-06	GAACGGACTC	10	3037	29.5	111.6	60	9	27.2
7	GL DecamerC-07	GTCCCGACGA	10	3012.99	33.6	103.6	70	9.7	29.1
8	GL DecamerC-08	TGGACCGGTG	10	3084.03	33.6	105.1	70	9.5	29.3
9	GL DecamerC-09	CTCACCGTCC	10	2923.95	33.6	88.7	70	11.3	33
10	GL DecamerC-10	TGTCTGGGTG	10	3090.04	29.5	99.7	60	10	31
11	GL DecamerC-11	AAAGCTGCGG	10	3077.02	29.5	115.7	60	8.6	26.6
12	GL DecamerC-12	TGTCATCCCC	10	2938.96	29.5	90	60	11.1	32.7
13	GL DecamerC-13	AAGCCTCGTC	10	2987.98	29.5	100.8	60	9.9	29.6
14	GL DecamerC-14	TGCGTGCTTG	10	3050.02	29.5	95.6	60	10.5	31.9
15	GL DecamerC-15	GACGGATCAG	10	3077.02	29.5	115.7	60	8.6	26.6
16	GL DecamerC-16	CACACTCCAG	10	2956.96	29.5	103.4	60	9.7	28.6
17	GL DecamerC-17	TTCCCCCAG	10	2923.95	33.6	88.7	70	11.3	33
18	GL DecamerC-18	TGAGTGGGTG	10	3139.06	29.5	110.5	60	9	28.4
19	GL DecamerC-19	GTTGCCAGCC	10	3003.99	33.6	96.9	70	10.3	31
20	GL DecamerC-20	ACTTCGCCAC	10	2947.96	29.5	96.7	60	10.3	30.5
21	GL DecamerD-01	ACCGCGAAGG	10	3062.01	33.6	114.4	70	8.7	26.8
22	GL DecamerD-02	GGACCCAACC	10	2981.97	33.6	106.2	70	9.4	28.1
23	GL DecamerD-03	GTCGCCGTCA	10	3003.99	33.6	96.9	70	10.3	31
24	GL DecamerD-04	TCTGGTGAGG	10	3099.04	29.5	106.4	60	9.4	29.1
25	GL DecamerD-05	TGAGCGGACA	10	3077.02	29.5	115.7	60	8.6	26.6
26	GL DecamerD-06	ACCTGAACGG	10	3037	29.5	111.6	60	9	27.2
27	GL DecamerD-07	TTGGCACGGG	10	3084.03	33.6	105.1	70	9.5	29.3
28	GL DecamerD-08	GTGTGCCCCA	10	3003.99	33.6	96.9	70	10.3	31
29	GL DecamerD-09	CTCTGGAGAC	10	3028	29.5	104.9	60	9.5	28.9
30	GL DecamerD-10	GGTCTACACC	10	2987.98	29.5	100.8	60	9.9	29.6
31	GL DecamerD-11	AGCGCCATTG	10	3028	29.5	104.9	60	9.5	28.9
32	GL DecamerD-12	CACCGTATCC	10	2947.96	29.5	96.7	60	10.3	30.5
33	GL DecamerD-13	GGGGTGACGA	10	3133.05	33.6	115.9	70	8.6	27
34	GL DecamerD-14	CTTCCCCAAG	10	2947.96	29.5	96.7	60	10.3	30.5
35	GL DecamerD-15	CATCCGTGCT	10	2978.98	29.5	94.1	60	10.6	31.7
36	GL DecamerD-16	AGGGCGTAAG	10	3117.04	29.5	119.8	60	8.3	26
37	GL DecamerD-17	TTTCCCCACGG	10	2978.98	29.5	94.1	60	10.6	31.7
38	GL DecamerD-18	GAGAGCCAAC	10	3046	29.5	118.3	60	8.5	25.7
39	GL DecamerD-19	CTGGGGACTT	10	3059.02	29.5	102.3	60	9.8	29.9
40	GL DecamerD-20	ACCCGGTCAC	10	2972.97	33.6	99.5	70	10.1	29.9



Primer Data Sheet

GL RAPD Decamer 03-EF Set

Catalog No. 40-0001-03

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL DecamerE-01	CCCAAGTCC	10	2972.97	33.6	99.5	70	10.1	29.9
2	GL DecamerE-02	GGTGCGGGAA	10	3133.05	33.6	115.9	70	8.6	27
3	GL DecamerE-03	CCAGATGCAC	10	2996.98	29.5	107.5	60	9.3	27.9
4	GL DecamerE-04	GTGACATGCC	10	3028	29.5	104.9	60	9.5	28.9
5	GL DecamerE-05	TCAGGGAGGT	10	3108.04	29.5	113.1	60	8.8	27.5
6	GL DecamerE-06	AAGACCCCTC	10	2956.96	29.5	103.4	60	9.7	28.6
7	GL DecamerE-07	AGATGCAGCC	10	3037	29.5	111.6	60	9	27.2
8	GL DecamerE-08	TCACCACGGT	10	2987.98	29.5	100.8	60	9.9	29.6
9	GL DecamerE-09	CTTCACCCGA	10	2947.96	29.5	96.7	60	10.3	30.5
10	GL DecamerE-10	CACCAGGTGA	10	3037	29.5	111.6	60	9	27.2
11	GL DecamerE-11	GAGTCTCAGG	10	3068.02	29.5	109	60	9.2	28.1
12	GL DecamerE-12	TTATCGCCCC	10	2938.96	29.5	90	60	11.1	32.7
13	GL DecamerE-13	CCCGATTCTGG	10	3003.99	33.6	96.9	70	10.3	31
14	GL DecamerE-14	TGCGGCTGAG	10	3084.03	33.6	105.1	70	9.5	29.3
15	GL DecamerE-15	ACGCACAACC	10	2965.96	29.5	110.1	60	9.1	26.9
16	GL DecamerE-16	GGTGACTGTG	10	3099.04	29.5	106.4	60	9.4	29.1
17	GL DecamerE-17	CTACTGCCGT	10	2978.98	29.5	94.1	60	10.6	31.7
18	GL DecamerE-18	GGACTGCAGA	10	3077.02	29.5	115.7	60	8.6	26.6
19	GL DecamerE-19	ACGGCGTATG	10	3068.02	29.5	109	60	9.2	28.1
20	GL DecamerE-20	AACGGTGACC	10	3037	29.5	111.6	60	9	27.2
21	GL DecamerF-01	ACGGATCCTG	10	3028	29.5	104.9	60	9.5	28.9
22	GL DecamerF-02	GAGGATCCCT	10	3028	29.5	104.9	60	9.5	28.9
23	GL DecamerF-03	CCTGATCAC	10	2947.96	29.5	96.7	60	10.3	30.5
24	GL DecamerF-04	GGTGATCAGG	10	3108.04	29.5	113.1	60	8.8	27.5
25	GL DecamerF-05	CCGAATTCCC	10	2947.96	29.5	96.7	60	10.3	30.5
26	GL DecamerF-06	GGGAATTCTGG	10	3108.04	29.5	113.1	60	8.8	27.5
27	GL DecamerF-07	CCGATATCCC	10	2947.96	29.5	96.7	60	10.3	30.5
28	GL DecamerF-08	GGGATATCTGG	10	3108.04	29.5	113.1	60	8.8	27.5
29	GL DecamerF-09	CCAAGCTTCC	10	2947.96	29.5	96.7	60	10.3	30.5
30	GL DecamerF-10	GGAAGCTTGG	10	3108.04	29.5	113.1	60	8.8	27.5
31	GL DecamerF-11	TTGGTACCCC	10	2978.98	29.5	94.1	60	10.6	31.7
32	GL DecamerF-12	ACGGTACCAAG	10	3037	29.5	111.6	60	9	27.2
33	GL DecamerF-13	GGCTGCAGAA	10	3077.02	29.5	115.7	60	8.6	26.6
34	GL DecamerF-14	TGCTGCAGGT	10	3059.02	29.5	102.3	60	9.8	29.9
35	GL DecamerF-15	CCAGTACTCC	10	2947.96	29.5	96.7	60	10.3	30.5
36	GL DecamerF-16	GGAGTACTGG	10	3108.04	29.5	113.1	60	8.8	27.5
37	GL DecamerF-17	AACCCGGGAA	10	3046	29.5	118.3	60	8.5	25.7
38	GL DecamerF-18	TTCCCGGGTT	10	3010	29.5	91.5	60	10.9	32.9
39	GL DecamerF-19	CCTCTAGACC	10	2947.96	29.5	96.7	60	10.3	30.5
40	GL DecamerF-20	GGTCTAGAGG	10	3108.04	29.5	113.1	60	8.8	27.5



Product Specification: Primer Data Sheet

GL RAPD Decamer 04 GH Set

Catalog No. 40-0001-04

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer G-01	CTACGGAGGA	10	3077.02	29.5	115.7	60	8.6	26.6
2	GL Decamer G-02	GGCACTGAGG	10	3093.03	33.6	111.8	70	8.9	27.7
3	GL Decamer G-03	GAGCCCTCCA	10	2972.97	33.6	99.5	70	10.1	29.9
4	GL Decamer G-04	AGCGTGTCTG	10	3059.02	29.5	102.3	60	9.8	29.9
5	GL Decamer G-05	CTGAGACGGA	10	3077.02	29.5	115.7	60	8.6	26.6
6	GL Decamer G-06	GTGCCTAAC	10	2987.98	29.5	100.8	60	9.9	29.6
7	GL Decamer G-07	GAACCTGCGG	10	3053.01	33.6	107.7	70	9.3	28.3
8	GL Decamer G-08	TCACGTCCAC	10	2947.96	29.5	96.7	60	10.3	30.5
9	GL Decamer G-09	CTGACGTCAC	10	2987.98	29.5	100.8	60	9.9	29.6
10	GL Decamer G-10	AGGGCCGTCT	10	3044.01	33.6	101	70	9.9	30.1
11	GL Decamer G-11	TGCCCCGTCGT	10	2994.99	33.6	90.2	70	11.1	33.2
12	GL Decamer G-12	CAGCTCACGA	10	2996.98	29.5	107.5	60	9.3	27.9
13	GL Decamer G-13	CTCTCCGCCA	10	2923.95	33.6	88.7	70	11.3	33
14	GL Decamer G-14	GGATGAGACC	10	3077.02	29.5	115.7	60	8.6	26.6
15	GL Decamer G-15	ACTGGGACTC	10	3028	29.5	104.9	60	9.5	28.9
16	GL Decamer G-16	AGCGTCCTCC	10	2963.97	33.6	92.8	70	10.8	31.9
17	GL Decamer G-17	ACGACCGACA	10	3005.98	29.5	114.2	60	8.8	26.3
18	GL Decamer G-18	GGCTCATGTG	10	3059.02	29.5	102.3	60	9.8	29.9
19	GL Decamer G-19	GTCAGGGCAA	10	3077.02	29.5	115.7	60	8.6	26.6
20	GL Decamer G-20	TCTCCCTCAG	10	2938.96	29.5	90	60	11.1	32.7
21	GL Decamer H-01	GGTCGGAGAA	10	3117.04	29.5	119.8	60	8.3	26
22	GL Decamer H-02	TCGGACGTGA	10	3068.02	29.5	109	60	9.2	28.1
23	GL Decamer H-03	AGACGTCCAC	10	2996.98	29.5	107.5	60	9.3	27.9
24	GL Decamer H-04	GGAAGTCGCC	10	3053.01	33.6	107.7	70	9.3	28.3
25	GL Decamer H-05	AGTCGTCCCC	10	2963.97	33.6	92.8	70	10.8	31.9
26	GL Decamer H-06	ACGCATCGCA	10	2996.98	29.5	107.5	60	9.3	27.9
27	GL Decamer H-07	CTGCATCGTG	10	3019	29.5	98.2	60	10.2	30.7
28	GL Decamer H-08	GAAACACCCC	10	2965.96	29.5	110.1	60	9.1	26.9
29	GL Decamer H-09	TGTAGCTGGG	10	3099.04	29.5	106.4	60	9.4	29.1
30	GL Decamer H-10	CCTACGTCAG	10	2987.98	29.5	100.8	60	9.9	29.6
31	GL Decamer H-11	CTTCCGCGAGT	10	2978.98	29.5	94.1	60	10.6	31.7
32	GL Decamer H-12	ACGCGCATGT	10	3028	29.5	104.9	60	9.5	28.9
33	GL Decamer H-13	GACGCCACAC	10	2981.97	33.6	106.2	70	9.4	28.1
34	GL Decamer H-14	ACCAGGTTGG	10	3068.02	29.5	109	60	9.2	28.1
35	GL Decamer H-15	AATGGCGCAG	10	3077.02	29.5	115.7	60	8.6	26.6
36	GL Decamer H-16	TCTCAGCTGG	10	3019	29.5	98.2	60	10.2	30.7
37	GL Decamer H-17	CACTCTCCTC	10	2898.94	29.5	85.9	60	11.6	33.7
38	GL Decamer H-18	GAATCGGCCA	10	3037	29.5	111.6	60	9	27.2
39	GL Decamer H-19	CTGACCAGCC	10	2972.97	33.6	99.5	70	10.1	29.9
40	GL Decamer H-20	GGGAGACATC	10	3077.02	29.5	115.7	60	8.6	26.6



Product Specification: Primer Data Sheet

GL RAPD Decamer 05 IJ Set

Catalog No. 40-0001-05

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer I-01	ACCTGGACAC	10	2996.98	29.5	107.5	60	9.3	27.9
2	GL Decamer I-02	GGAGGAGAGG	10	3182.07	33.6	126.7	70	7.9	25.1
3	GL Decamer I-03	CAGAACCCCA	10	3005.98	29.5	114.2	60	8.8	26.3
4	GL Decamer I-04	CCGCCTAGTC	10	2963.97	33.6	92.8	70	10.8	31.9
5	GL Decamer I-05	TGTTCCACGG	10	3019	29.5	98.2	60	10.2	30.7
6	GL Decamer I-06	AAGCGGGCAG	10	3102.03	33.6	118.5	70	8.4	26.2
7	GL Decamer I-07	CAGCGACAAG	10	3046	29.5	118.3	60	8.5	25.7
8	GL Decamer I-08	TTTGCCCCGT	10	3010	29.5	91.5	60	10.9	32.9
9	GL Decamer I-09	TGGAGAGCAG	10	3117.04	29.5	119.8	60	8.3	26
10	GL Decamer I-10	ACAACGCGAG	10	3046	29.5	118.3	60	8.5	25.7
11	GL Decamer I-11	ACATGCCGTG	10	3028	29.5	104.9	60	9.5	28.9
12	GL Decamer I-12	AGAGGGCACA	10	3086.02	29.5	122.4	60	8.2	25.2
13	GL Decamer I-13	CTGGGGCTGA	10	3084.03	33.6	105.1	70	9.5	29.3
14	GL Decamer I-14	TGACGGCGGT	10	3084.03	33.6	105.1	70	9.5	29.3
15	GL Decamer I-15	TCATCCGAGG	10	3028	29.5	104.9	60	9.5	28.9
16	GL Decamer I-16	TCTCCGCCCT	10	2914.95	33.6	82	70	12.2	35.5
17	GL Decamer I-17	GGTGGTGTATG	10	3139.06	29.5	110.5	60	9	28.4
18	GL Decamer I-18	TGCCCAAGCCT	10	2963.97	33.6	92.8	70	10.8	31.9
19	GL Decamer I-19	AATGCGGGAG	10	3117.04	29.5	119.8	60	8.3	26
20	GL Decamer I-20	AAAGTGCAGGG	10	3117.04	29.5	119.8	60	8.3	26
21	GL Decamer J-01	CCCGGCATAA	10	2996.98	29.5	107.5	60	9.3	27.9
22	GL Decamer J-02	CCCGTTGGGA	10	3044.01	33.6	101	70	9.9	30.1
23	GL Decamer J-03	TCTCCGTTG	10	2969.98	29.5	87.4	60	11.4	34
24	GL Decamer J-04	CCGAACACGG	10	3021.99	33.6	110.3	70	9.1	27.4
25	GL Decamer J-05	CTCCATGGGG	10	3044.01	33.6	101	70	9.9	30.1
26	GL Decamer J-06	TCGTTCCGCA	10	2978.98	29.5	94.1	60	10.6	31.7
27	GL Decamer J-07	CCTCTCGACA	10	2947.96	29.5	96.7	60	10.3	30.5
28	GL Decamer J-08	CATACCGTGG	10	3028	29.5	104.9	60	9.5	28.9
29	GL Decamer J-09	TGAGCCTCAC	10	2987.98	29.5	100.8	60	9.9	29.6
30	GL Decamer J-10	AAGCCCGAGG	10	3062.01	33.6	114.4	70	8.7	26.8
31	GL Decamer J-11	ACTCCTGCGA	10	2987.98	29.5	100.8	60	9.9	29.6
32	GL Decamer J-12	GTCCCGTGGT	10	3035.01	33.6	94.3	70	10.6	32.2
33	GL Decamer J-13	CCACACTACC	10	2916.94	29.5	99.3	60	10.1	29.4
34	GL Decamer J-14	CACCCGGATG	10	3012.99	33.6	103.6	70	9.7	29.1
35	GL Decamer J-15	TGTAGCAGGG	10	3108.04	29.5	113.1	60	8.8	27.5
36	GL Decamer J-16	CTGCTTAGGG	10	3059.02	29.5	102.3	60	9.8	29.9
37	GL Decamer J-17	ACGCCAGTTC	10	2987.98	29.5	100.8	60	9.9	29.6
38	GL Decamer J-18	TGGTCGCAGA	10	3068.02	29.5	109	60	9.2	28.1
39	GL Decamer J-19	GGACACCACT	10	2996.98	29.5	107.5	60	9.3	27.9
40	GL Decamer J-20	AAGCGGCCTC	10	3012.99	33.6	103.6	70	9.7	29.1



Product Specification: Primer Data Sheet

GL RAPD Decamer 06 KL Set

Catalog No. 40-0001-06

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer K-01	CATTGAGGCC	10	2987.98	29.5	100.8	60	9.9	29.6
2	GL Decamer K-02	GTCTCCGCAA	10	2987.98	29.5	100.8	60	9.9	29.6
3	GL Decamer K-03	CCAGCTTAGG	10	3028	29.5	104.9	60	9.5	28.9
4	GL Decamer K-04	CCGCCCAAC	10	2941.95	33.6	102.1	70	9.8	28.8
5	GL Decamer K-05	TCTGTCGAGG	10	3059.02	29.5	102.3	60	9.8	29.9
6	GL Decamer K-06	CACCTTCCC	10	2898.94	29.5	85.9	60	11.6	33.7
7	GL Decamer K-07	AGCGAGCAAG	10	3086.02	29.5	122.4	60	8.2	25.2
8	GL Decamer K-08	GAACACTGGG	10	3077.02	29.5	115.7	60	8.6	26.6
9	GL Decamer K-09	CCCTACCGAC	10	2932.95	33.6	95.4	70	10.5	30.7
10	GL Decamer K-10	GTGCAACGTG	10	3068.02	29.5	109	60	9.2	28.1
11	GL Decamer K-11	AATGCCCGAG	10	2996.98	29.5	107.5	60	9.3	27.9
12	GL Decamer K-12	TGGCCCTCAC	10	2963.97	33.6	92.8	70	10.8	31.9
13	GL Decamer K-13	GGTTGTACCC	10	3019	29.5	98.2	60	10.2	30.7
14	GL Decamer K-14	CCCGCTACAC	10	2932.95	33.6	95.4	70	10.5	30.7
15	GL Decamer K-15	CTCCTGCCAA	10	2947.96	29.5	96.7	60	10.3	30.5
16	GL Decamer K-16	GAGCGTCGAA	10	3077.02	29.5	115.7	60	8.6	26.6
17	GL Decamer K-17	CCCAGCTGTG	10	3003.99	33.6	96.9	70	10.3	31
18	GL Decamer K-18	CCTAGTCGAG	10	3028	29.5	104.9	60	9.5	28.9
19	GL Decamer K-19	CACAGGCGGA	10	3062.01	33.6	114.4	70	8.7	26.8
20	GL Decamer K-20	GTGTCGCGAG	10	3084.03	33.6	105.1	70	9.5	29.3
21	GL Decamer L-01	GGCATGACCT	10	3028	29.5	104.9	60	9.5	28.9
22	GL Decamer L-02	TGGGCGTCAA	10	3068.02	29.5	109	60	9.2	28.1
23	GL Decamer L-03	CCAGCAGCTT	10	2987.98	29.5	100.8	60	9.9	29.6
24	GL Decamer L-04	GACTGCACAC	10	2996.98	29.5	107.5	60	9.3	27.9
25	GL Decamer L-05	ACGCAGGCAC	10	3021.99	33.6	110.3	70	9.1	27.4
26	GL Decamer L-06	GAGGGAAGAG	10	3166.06	29.5	130.6	60	7.7	24.2
27	GL Decamer L-07	AGGCAGGAAC	10	3102.03	33.6	118.5	70	8.4	26.2
28	GL Decamer L-08	AGCAGGTGGA	10	3117.04	29.5	119.8	60	8.3	26
29	GL Decamer L-09	TGCGAGAGTC	10	3068.02	29.5	109	60	9.2	28.1
30	GL Decamer L-10	TGGGAGATGG	10	3148.06	29.5	117.2	60	8.5	26.9
31	GL Decamer L-11	ACGATGAGCC	10	3037	29.5	111.6	60	9	27.2
32	GL Decamer L-12	GGGCGGTACT	10	3084.03	33.6	105.1	70	9.5	29.3
33	GL Decamer L-13	ACCGCCTGCT	10	2963.97	33.6	92.8	70	10.8	31.9
34	GL Decamer L-14	GTGACAGGCT	10	3068.02	29.5	109	60	9.2	28.1
35	GL Decamer L-15	AAGAGAGGGG	10	3166.06	29.5	130.6	60	7.7	24.2
36	GL Decamer L-16	AGGTTGCAGG	10	3108.04	29.5	113.1	60	8.8	27.5
37	GL Decamer L-17	AGCCTGAGCC	10	3012.99	33.6	103.6	70	9.7	29.1
38	GL Decamer L-18	ACCACCCACC	10	2901.93	33.6	98	70	10.2	29.6
39	GL Decamer L-19	GAGTGGTGAC	10	3108.04	29.5	113.1	60	8.8	27.5
40	GL Decamer L-20	TGGTGGACCA	10	3068.02	29.5	109	60	9.2	28.1



Product Specification: Primer Data Sheet

GL RAPD Decamer 07 MN Set

Catalog No. 40-0001-07

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer M-01	GTTGGTGGCT	10	3090.04	29.5	99.7	60	10	31
2	GL Decamer M-02	ACAAACGCCCTC	10	2956.96	29.5	103.4	60	9.7	28.6
3	GL Decamer M-03	GGGGGGATGAG	10	3173.07	33.6	120	70	8.3	26.4
4	GL Decamer M-04	GGCGGGTTGTC	10	3075.03	33.6	98.4	70	10.2	31.3
5	GL Decamer M-05	GGGAACGTGT	10	3108.04	29.5	113.1	60	8.8	27.5
6	GL Decamer M-06	CTGGGCAACT	10	3028	29.5	104.9	60	9.5	28.9
7	GL Decamer M-07	CCGTGACTCA	10	2987.98	29.5	100.8	60	9.9	29.6
8	GL Decamer M-08	TCTGTTCCCC	10	2929.96	29.5	83.3	60	12	35.2
9	GL Decamer M-09	GTCTTGCGGA	10	3059.02	29.5	102.3	60	9.8	29.9
10	GL Decamer M-10	TCTGGCGCAC	10	3003.99	33.6	96.9	70	10.3	31
11	GL Decamer M-11	GTCCACTGTG	10	3019	29.5	98.2	60	10.2	30.7
12	GL Decamer M-12	GGGACGTTGG	10	3124.05	33.6	109.2	70	9.2	28.6
13	GL Decamer M-13	GGTGGTCAAG	10	3108.04	29.5	113.1	60	8.8	27.5
14	GL Decamer M-14	AGGGTCGTTTC	10	3059.02	29.5	102.3	60	9.8	29.9
15	GL Decamer M-15	GACCTACCAC	10	2956.96	29.5	103.4	60	9.7	28.6
16	GL Decamer M-16	GTAACCAGCC	10	2996.98	29.5	107.5	60	9.3	27.9
17	GL Decamer M-17	TCAGTCCGGG	10	3044.01	33.6	101	70	9.9	30.1
18	GL Decamer M-18	CACCATCCGT	10	2947.96	29.5	96.7	60	10.3	30.5
19	GL Decamer M-19	CCTTCAGGCA	10	2987.98	29.5	100.8	60	9.9	29.6
20	GL Decamer M-20	AGGTCTTGGG	10	3099.04	29.5	106.4	60	9.4	29.1
21	GL Decamer N-01	CTCACGTTGG	10	3019	29.5	98.2	60	10.2	30.7
22	GL Decamer N-02	ACCAGGGGCA	10	3062.01	33.6	114.4	70	8.7	26.8
23	GL Decamer N-03	GGTACTCCCC	10	2963.97	33.6	92.8	70	10.8	31.9
24	GL Decamer N-04	GACCGACCCA	10	2981.97	33.6	106.2	70	9.4	28.1
25	GL Decamer N-05	ACTGAACGCC	10	2996.98	29.5	107.5	60	9.3	27.9
26	GL Decamer N-06	GAGACGCACA	10	3046	29.5	118.3	60	8.5	25.7
27	GL Decamer N-07	CAGCCCAGAG	10	3021.99	33.6	110.3	70	9.1	27.4
28	GL Decamer N-08	ACCTCAGCTC	10	2947.96	29.5	96.7	60	10.3	30.5
29	GL Decamer N-09	TGCCGGCTTG	10	3035.01	33.6	94.3	70	10.6	32.2
30	GL Decamer N-10	ACAACTGGGG	10	3077.02	29.5	115.7	60	8.6	26.6
31	GL Decamer N-11	TCGCCGCAAA	10	2996.98	29.5	107.5	60	9.3	27.9
32	GL Decamer N-12	CACAGACACC	10	2965.96	29.5	110.1	60	9.1	26.9
33	GL Decamer N-13	AGCGTCACTC	10	2987.98	29.5	100.8	60	9.9	29.6
34	GL Decamer N-14	TCGTGCGGGT	10	3075.03	33.6	98.4	70	10.2	31.3
35	GL Decamer N-15	CAGCGACTGT	10	3028	29.5	104.9	60	9.5	28.9
36	GL Decamer N-16	AAGCGACCTG	10	3037	29.5	111.6	60	9	27.2
37	GL Decamer N-17	CATTGGGGAG	10	3108.04	29.5	113.1	60	8.8	27.5
38	GL Decamer N-18	GGTGAGGTCA	10	3108.04	29.5	113.1	60	8.8	27.5
39	GL Decamer N-19	GTCCGTACTG	10	3019	29.5	98.2	60	10.2	30.7
40	GL Decamer N-20	GGTGCTCCGT	10	3035.01	33.6	94.3	70	10.6	32.2



Product Specification: Primer Data Sheet

GL RAPD Decamer 08 OP Set

Catalog No. 40-0001-08

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer O-01	GGCACGTAAG	10	3077.02	29.5	115.7	60	8.6	26.6
2	GL Decamer O-02	ACGTAGCGTC	10	3028	29.5	104.9	60	9.5	28.9
3	GL Decamer O-03	CTGTTGCTAC	10	2993.99	25.4	95.4	50	10.5	31.4
4	GL Decamer O-04	AAGTCGCGTC	10	2987.98	29.5	100.8	60	9.9	29.6
5	GL Decamer O-05	CCCAGTCACT	10	2947.96	29.5	96.7	60	10.3	30.5
6	GL Decamer O-06	CCACGGGAAG	10	3062.01	33.6	114.4	70	8.7	26.8
7	GL Decamer O-07	CAGCACTGAC	10	2996.98	29.5	107.5	60	9.3	27.9
8	GL Decamer O-08	CCTCCAGTGT	10	2978.98	29.5	94.1	60	10.6	31.7
9	GL Decamer O-09	TCCCCACGCAA	10	2956.96	29.5	103.4	60	9.7	28.6
10	GL Decamer O-10	TCAGAGCGCC	10	3012.99	33.6	103.6	70	9.7	29.1
11	GL Decamer O-11	GACAGGAGGT	10	3117.04	29.5	119.8	60	8.3	26
12	GL Decamer O-12	CAGTGCTGTG	10	3059.02	29.5	102.3	60	9.8	29.9
13	GL Decamer O-13	GTCAGAGTCC	10	3028	29.5	104.9	60	9.5	28.9
14	GL Decamer O-14	AGCATGGCTC	10	3028	29.5	104.9	60	9.5	28.9
15	GL Decamer O-15	TGGCGTCCCTT	10	3010	29.5	91.5	60	10.9	32.9
16	GL Decamer O-16	TCGGCGGTTC	10	3035.01	33.6	94.3	70	10.6	32.2
17	GL Decamer O-17	GGCTTATGCC	10	3019	29.5	98.2	60	10.2	30.7
18	GL Decamer O-18	CTCGCTATCC	10	2938.96	29.5	90	60	11.1	32.7
19	GL Decamer O-19	GGTGCACGTT	10	3059.02	29.5	102.3	60	9.8	29.9
20	GL Decamer O-20	ACACACGCTG	10	2996.98	29.5	107.5	60	9.3	27.9
21	GL Decamer P-01	GTAGCACTCC	10	2987.98	29.5	100.8	60	9.9	29.6
22	GL Decamer P-02	TCGGCACGCA	10	3012.99	33.6	103.6	70	9.7	29.1
23	GL Decamer P-03	CTGATACGCC	10	2987.98	29.5	100.8	60	9.9	29.6
24	GL Decamer P-04	GTGTCTCAGG	10	3059.02	29.5	102.3	60	9.8	29.9
25	GL Decamer P-05	CCCCGGTAAC	10	2972.97	33.6	99.5	70	10.1	29.9
26	GL Decamer P-06	GTGGGCTGAC	10	3084.03	33.6	105.1	70	9.5	29.3
27	GL Decamer P-07	GTCCCATGCCA	10	2987.98	29.5	100.8	60	9.9	29.6
28	GL Decamer P-08	ACATGCCCA	10	2956.96	29.5	103.4	60	9.7	28.6
29	GL Decamer P-09	GTGGTCCGCA	10	3044.01	33.6	101	70	9.9	30.1
30	GL Decamer P-10	TCCCGCCTAC	10	2923.95	33.6	88.7	70	11.3	33
31	GL Decamer P-11	AACGCGTCGG	10	3053.01	33.6	107.7	70	9.3	28.3
32	GL Decamer P-12	AAGGGCGAGT	10	3117.04	29.5	119.8	60	8.3	26
33	GL Decamer P-13	GGAGTGCCTC	10	3044.01	33.6	101	70	9.9	30.1
34	GL Decamer P-14	CCAGCCGAAC	10	2981.97	33.6	106.2	70	9.4	28.1
35	GL Decamer P-15	GGAAGCCAAC	10	3046	29.5	118.3	60	8.5	25.7
36	GL Decamer P-16	CCAAGCTGCC	10	2972.97	33.6	99.5	70	10.1	29.9
37	GL Decamer P-17	TGACCCGCCT	10	2963.97	33.6	92.8	70	10.8	31.9
38	GL Decamer P-18	GGCTTGGCCT	10	3035.01	33.6	94.3	70	10.6	32.2
39	GL Decamer P-19	GGGAAGGACA	10	3126.04	29.5	126.5	60	7.9	24.7
40	GL Decamer P-20	GACCCTAGTC	10	2987.98	29.5	100.8	60	9.9	29.6



Product Specification: Primer Data Sheet

GL RAPD Decamer 09 QR Set

Catalog No. 40-0001-09

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer Q-01	GGGACGATGG	10	3133.05	33.6	115.9	70	8.6	27
2	GL Decamer Q-02	TCTGTCGGTC	10	3010	29.5	91.5	60	10.9	32.9
3	GL Decamer Q-03	GGTCACCTCA	10	2987.98	29.5	100.8	60	9.9	29.6
4	GL Decamer Q-04	AGTGCCTGA	10	3068.02	29.5	109	60	9.2	28.1
5	GL Decamer Q-05	CCCGCGTCTTG	10	2994.99	33.6	90.2	70	11.1	33.2
6	GL Decamer Q-06	GAGCGCCTTG	10	3044.01	33.6	101	70	9.9	30.1
7	GL Decamer Q-07	CCCCGATGGT	10	3003.99	33.6	96.9	70	10.3	31
8	GL Decamer Q-08	CTCCAGCGGA	10	3012.99	33.6	103.6	70	9.7	29.1
9	GL Decamer Q-09	GGCTAACCGA	10	3037	29.5	111.6	60	9	27.2
10	GL Decamer Q-10	TGTGCCGAA	10	3028	29.5	104.9	60	9.5	28.9
11	GL Decamer Q-11	TCTCCGCAAC	10	2947.96	29.5	96.7	60	10.3	30.5
12	GL Decamer Q-12	AGTAGGGCAC	10	3077.02	29.5	115.7	60	8.6	26.6
13	GL Decamer Q-13	GGAGTGGACA	10	3117.04	29.5	119.8	60	8.3	26
14	GL Decamer Q-14	GGACGCTTCA	10	3028	29.5	104.9	60	9.5	28.9
15	GL Decamer Q-15	GGGTAACGTG	10	3108.04	29.5	113.1	60	8.8	27.5
16	GL Decamer Q-16	AGTGCAGCCA	10	3037	29.5	111.6	60	9	27.2
17	GL Decamer Q-17	GAAGCCCTTG	10	3028	29.5	104.9	60	9.5	28.9
18	GL Decamer Q-18	AGGCTGGGTG	10	3124.05	33.6	109.2	70	9.2	28.6
19	GL Decamer Q-19	CCCCCTATCA	10	2907.94	29.5	92.6	60	10.8	31.4
20	GL Decamer Q-20	TCGCCAGTC	10	2963.97	33.6	92.8	70	10.8	31.9
21	GL Decamer R-01	TGCGGGTCCT	10	3035.01	33.6	94.3	70	10.6	32.2
22	GL Decamer R-02	CACAGCTGCC	10	2972.97	33.6	99.5	70	10.1	29.9
23	GL Decamer R-03	ACACAGAGGG	10	3086.02	29.5	122.4	60	8.2	25.2
24	GL Decamer R-04	CCCGTAGCAC	10	2972.97	33.6	99.5	70	10.1	29.9
25	GL Decamer R-05	GACCTAGTGG	10	3068.02	29.5	109	60	9.2	28.1
26	GL Decamer R-06	GTCTACGGCA	10	3028	29.5	104.9	60	9.5	28.9
27	GL Decamer R-07	ACTGGCCTGA	10	3028	29.5	104.9	60	9.5	28.9
28	GL Decamer R-08	CCCGTTGCCT	10	2954.97	33.6	86.1	70	11.6	34.3
29	GL Decamer R-09	TGAGCACGAG	10	3077.02	29.5	115.7	60	8.6	26.6
30	GL Decamer R-10	CCATTCCCCA	10	2907.94	29.5	92.6	60	10.8	31.4
31	GL Decamer R-11	GTAGCCGTCT	10	3019	29.5	98.2	60	10.2	30.7
32	GL Decamer R-12	ACAGGTGCGT	10	3068.02	29.5	109	60	9.2	28.1
33	GL Decamer R-13	GGACGACAAG	10	3086.02	29.5	122.4	60	8.2	25.2
34	GL Decamer R-14	CAGGATTCCC	10	2987.98	29.5	100.8	60	9.9	29.6
35	GL Decamer R-15	GGACAACGAG	10	3086.02	29.5	122.4	60	8.2	25.2
36	GL Decamer R-16	CTCTGCGCGT	10	2994.99	33.6	90.2	70	11.1	33.2
37	GL Decamer R-17	CCGTACGTAG	10	3028	29.5	104.9	60	9.5	28.9
38	GL Decamer R-18	GGCTTTGCCA	10	3019	29.5	98.2	60	10.2	30.7
39	GL Decamer R-19	CCTCCTCATC	10	2898.94	29.5	85.9	60	11.6	33.7
40	GL Decamer R-20	ACGGCAAGGA	10	3086.02	29.5	122.4	60	8.2	25.2



Product Specification: Primer Data Sheet

GL RAPD Decamer 10 ST Set

Catalog No. 40-0001-10

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer S-01	CTACTGCGCT	10	2978.98	29.5	94.1	60	10.6	31.7
2	GL Decamer S-02	CCTCTGACTG	10	2978.98	29.5	94.1	60	10.6	31.7
3	GL Decamer S-03	CAGAGGTCCC	10	3012.99	33.6	103.6	70	9.7	29.1
4	GL Decamer S-04	CACCCCCCTTG	10	2923.95	33.6	88.7	70	11.3	33
5	GL Decamer S-05	TTTGGGGCCT	10	3050.02	29.5	95.6	60	10.5	31.9
6	GL Decamer S-06	GATACCTCGG	10	3028	29.5	104.9	60	9.5	28.9
7	GL Decamer S-07	TCCGATGCTG	10	3019	29.5	98.2	60	10.2	30.7
8	GL Decamer S-08	TTCAGGGTGG	10	3099.04	29.5	106.4	60	9.4	29.1
9	GL Decamer S-09	TCCTGGTCCC	10	2954.97	33.6	86.1	70	11.6	34.3
10	GL Decamer S-10	ACCGTTCCAG	10	2987.98	29.5	100.8	60	9.9	29.6
11	GL Decamer S-11	AGTCGGGTGG	10	3124.05	33.6	109.2	70	9.2	28.6
12	GL Decamer S-12	CTGGGTGAGT	10	3099.04	29.5	106.4	60	9.4	29.1
13	GL Decamer S-13	GTCGTTCCGT	10	3010	29.5	91.5	60	10.9	32.9
14	GL Decamer S-14	AAAGGGGTCC	10	3077.02	29.5	115.7	60	8.6	26.6
15	GL Decamer S-15	CAGTTCACGG	10	3028	29.5	104.9	60	9.5	28.9
16	GL Decamer S-16	AGGGGGTTCC	10	3084.03	33.6	105.1	70	9.5	29.3
17	GL Decamer S-17	TGGGGACCAC	10	3053.01	33.6	107.7	70	9.3	28.3
18	GL Decamer S-18	CTGGCGAACT	10	3028	29.5	104.9	60	9.5	28.9
19	GL Decamer S-19	GAGTCAGCAG	10	3077.02	29.5	115.7	60	8.6	26.6
20	GL Decamer S-20	TCTGGACGGA	10	3068.02	29.5	109	60	9.2	28.1
21	GL Decamer T-01	GGGCCACTCA	10	3012.99	33.6	103.6	70	9.7	29.1
22	GL Decamer T-02	GGAGAGACTC	10	3077.02	29.5	115.7	60	8.6	26.6
23	GL Decamer T-03	TCCACTCCTG	10	2938.96	29.5	90	60	11.1	32.7
24	GL Decamer T-04	CACAGAGGGA	10	3086.02	29.5	122.4	60	8.2	25.2
25	GL Decamer T-05	GGGTGGCA	10	3099.04	29.5	106.4	60	9.4	29.1
26	GL Decamer T-06	CAAGGGCAGA	10	3086.02	29.5	122.4	60	8.2	25.2
27	GL Decamer T-07	GGCAGGCTGT	10	3084.03	33.6	105.1	70	9.5	29.3
28	GL Decamer T-08	AACGGCGACA	10	3046	29.5	118.3	60	8.5	25.7
29	GL Decamer T-09	CACCCCTGAG	10	2972.97	33.6	99.5	70	10.1	29.9
30	GL Decamer T-10	CCTTCGGAAG	10	3028	29.5	104.9	60	9.5	28.9
31	GL Decamer T-11	TTCCCCCGCA	10	2963.97	33.6	92.8	70	10.8	31.9
32	GL Decamer T-12	GGGTGTGTAG	10	3139.06	29.5	110.5	60	9	28.4
33	GL Decamer T-13	AGGACTGCCA	10	3037	29.5	111.6	60	9	27.2
34	GL Decamer T-14	AATGCCGCAG	10	3037	29.5	111.6	60	9	27.2
35	GL Decamer T-15	GGATGCCACT	10	3028	29.5	104.9	60	9.5	28.9
36	GL Decamer T-16	GGTGAACGCT	10	3068.02	29.5	109	60	9.2	28.1
37	GL Decamer T-17	CCAACGTCGT	10	2987.98	29.5	100.8	60	9.9	29.6
38	GL Decamer T-18	GATGCCAGAC	10	3037	29.5	111.6	60	9	27.2
39	GL Decamer T-19	GTCCGTATGG	10	3059.02	29.5	102.3	60	9.8	29.9
40	GL Decamer T-20	GACCAATGCC	10	2996.98	29.5	107.5	60	9.3	27.9



Product Specification: Primer Data Sheet

GL RAPD Decamer 11 UV Set

Catalog No. 40-0001-11

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer U-01	ACGGACGTCA	10	3037	29.5	111.6	60	9	27.2
2	GL Decamer U-02	CTGAGGTCTC	10	3019	29.5	98.2	60	10.2	30.7
3	GL Decamer U-03	CTATGCCGAC	10	2987.98	29.5	100.8	60	9.9	29.6
4	GL Decamer U-04	ACCTTCGGAC	10	2987.98	29.5	100.8	60	9.9	29.6
5	GL Decamer U-05	TTGGCGGCCT	10	3035.01	33.6	94.3	70	10.6	32.2
6	GL Decamer U-06	ACCTTTGCGG	10	3019	29.5	98.2	60	10.2	30.7
7	GL Decamer U-07	CCTGCTCATC	10	2938.96	29.5	90	60	11.1	32.7
8	GL Decamer U-08	GGCGAAGGTT	10	3108.04	29.5	113.1	60	8.8	27.5
9	GL Decamer U-09	CCACATCGGT	10	2987.98	29.5	100.8	60	9.9	29.6
10	GL Decamer U-10	ACCTCGGCAC	10	2972.97	33.6	99.5	70	10.1	29.9
11	GL Decamer U-11	AGACCCAGAG	10	3046	29.5	118.3	60	8.5	25.7
12	GL Decamer U-12	TCACCAGCCA	10	2956.96	29.5	103.4	60	9.7	28.6
13	GL Decamer U-13	GGCTGGTTC	10	3035.01	33.6	94.3	70	10.6	32.2
14	GL Decamer U-14	TGGGTCCCTC	10	2994.99	33.6	90.2	70	11.1	33.2
15	GL Decamer U-15	ACGGGCCAGT	10	3053.01	33.6	107.7	70	9.3	28.3
16	GL Decamer U-16	CTGCGCTGG	10	3044.01	33.6	101	70	9.9	30.1
17	GL Decamer U-17	ACCTGGGGAG	10	3093.03	33.6	111.8	70	8.9	27.7
18	GL Decamer U-18	GAGGTCCACA	10	3037	29.5	111.6	60	9	27.2
19	GL Decamer U-19	GTCAGTGC	10	3084.03	33.6	105.1	70	9.5	29.3
20	GL Decamer U-20	ACAGCCCCA	10	2941.95	33.6	102.1	70	9.8	28.8
21	GL Decamer V-01	TGACGCATGG	10	3068.02	29.5	109	60	9.2	28.1
22	GL Decamer V-02	AGTCACTCCC	10	2947.96	29.5	96.7	60	10.3	30.5
23	GL Decamer V-03	CTCCCCTGAA	10	2947.96	29.5	96.7	60	10.3	30.5
24	GL Decamer V-04	CCCCTCACGA	10	2932.95	33.6	95.4	70	10.5	30.7
25	GL Decamer V-05	TCCGAGAGGG	10	3093.03	33.6	111.8	70	8.9	27.7
26	GL Decamer V-06	ACGCCAGGT	10	3012.99	33.6	103.6	70	9.7	29.1
27	GL Decamer V-07	GAAGCCAGCC	10	3021.99	33.6	110.3	70	9.1	27.4
28	GL Decamer V-08	GGACGGCGTT	10	3084.03	33.6	105.1	70	9.5	29.3
29	GL Decamer V-09	TGTACCCGTC	10	2978.98	29.5	94.1	60	10.6	31.7
30	GL Decamer V-10	GGACCTGCTG	10	3044.01	33.6	101	70	9.9	30.1
31	GL Decamer V-11	CTCGACAGAG	10	3037	29.5	111.6	60	9	27.2
32	GL Decamer V-12	ACCCCCCACT	10	2892.93	33.6	91.3	70	11	31.7
33	GL Decamer V-13	ACCCCTGAA	10	2956.96	29.5	103.4	60	9.7	28.6
34	GL Decamer V-14	AGATCCCGCC	10	2972.97	33.6	99.5	70	10.1	29.9
35	GL Decamer V-15	CAGTGCCGGT	10	3044.01	33.6	101	70	9.9	30.1
36	GL Decamer V-16	ACACCCCCACA	10	2925.94	29.5	106	60	9.4	27.6
37	GL Decamer V-17	ACCGGCTTGT	10	3019	29.5	98.2	60	10.2	30.7
38	GL Decamer V-18	TGGTGGCGTT	10	3090.04	29.5	99.7	60	10	31
39	GL Decamer V-19	GGGTGTGCAG	10	3124.05	33.6	109.2	70	9.2	28.6
40	GL Decamer V-20	CAGCATGGTC	10	3028	29.5	104.9	60	9.5	28.9



Product Specification: Primer Data Sheet

GL RAPD Decamer 12 WX Set

Catalog No. 40-0001-12

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer W-01	CTCAGTGTCC	10	2978.98	29.5	94.1	60	10.6	31.7
2	GL Decamer W-02	ACCCCCGCCAA	10	2941.95	33.6	102.1	70	9.8	28.8
3	GL Decamer W-03	GTCCGGAGTG	10	3084.03	33.6	105.1	70	9.5	29.3
4	GL Decamer W-04	CAGAACCGGA	10	3086.02	29.5	122.4	60	8.2	25.2
5	GL Decamer W-05	GGCGGATAAG	10	3117.04	29.5	119.8	60	8.3	26
6	GL Decamer W-06	AGGCCCGATG	10	3053.01	33.6	107.7	70	9.3	28.3
7	GL Decamer W-07	CTGGACGTCA	10	3028	29.5	104.9	60	9.5	28.9
8	GL Decamer W-08	GACTGCCTCT	10	2978.98	29.5	94.1	60	10.6	31.7
9	GL Decamer W-09	GTGACCGAGT	10	3068.02	29.5	109	60	9.2	28.1
10	GL Decamer W-10	TCGCATCCCT	10	2938.96	29.5	90	60	11.1	32.7
11	GL Decamer W-11	CTGATGCGTG	10	3059.02	29.5	102.3	60	9.8	29.9
12	GL Decamer W-12	TGGGCAGAAG	10	3117.04	29.5	119.8	60	8.3	26
13	GL Decamer W-13	CACAGCGACA	10	3005.98	29.5	114.2	60	8.8	26.3
14	GL Decamer W-14	CTGCTGAGCA	10	3028	29.5	104.9	60	9.5	28.9
15	GL Decamer W-15	ACACCGGAAC	10	3005.98	29.5	114.2	60	8.8	26.3
16	GL Decamer W-16	CAGCCTACCA	10	2956.96	29.5	103.4	60	9.7	28.6
17	GL Decamer W-17	GTCCTGGTT	10	3050.02	29.5	95.6	60	10.5	31.9
18	GL Decamer W-18	TTCAGGGCAC	10	3028	29.5	104.9	60	9.5	28.9
19	GL Decamer W-19	CAAAGCGCTC	10	2996.98	29.5	107.5	60	9.3	27.9
20	GL Decamer W-20	TGTGGCAGCA	10	3068.02	29.5	109	60	9.2	28.1
21	GL Decamer X-01	CTGGGCACGA	10	3053.01	33.6	107.7	70	9.3	28.3
22	GL Decamer X-02	TTCCGCCACC	10	2923.95	33.6	88.7	70	11.3	33
23	GL Decamer X-03	TGGCGCAGTG	10	3084.03	33.6	105.1	70	9.5	29.3
24	GL Decamer X-04	CCGCTACCGA	10	2972.97	33.6	99.5	70	10.1	29.9
25	GL Decamer X-05	CCTTCCCTC	10	2889.94	29.5	79.2	60	12.6	36.5
26	GL Decamer X-06	ACGCCAGAGG	10	3062.01	33.6	114.4	70	8.7	26.8
27	GL Decamer X-07	GAGCGAGGCT	10	3093.03	33.6	111.8	70	8.9	27.7
28	GL Decamer X-08	CAGGGGTGGA	10	3133.05	33.6	115.9	70	8.6	27
29	GL Decamer X-09	GGTCTGGTG	10	3090.04	29.5	99.7	60	10	31
30	GL Decamer X-10	CCCTAGACTG	10	2987.98	29.5	100.8	60	9.9	29.6
31	GL Decamer X-11	GGAGCCTCAG	10	3053.01	33.6	107.7	70	9.3	28.3
32	GL Decamer X-12	TCGCCAGCCA	10	2972.97	33.6	99.5	70	10.1	29.9
33	GL Decamer X-13	ACGGGAGCAA	10	3086.02	29.5	122.4	60	8.2	25.2
34	GL Decamer X-14	ACAGGTGCTG	10	3068.02	29.5	109	60	9.2	28.1
35	GL Decamer X-15	CAGACAAGCC	10	3005.98	29.5	114.2	60	8.8	26.3
36	GL Decamer X-16	CTCTGTTCGG	10	3010	29.5	91.5	60	10.9	32.9
37	GL Decamer X-17	GACACGGACC	10	3021.99	33.6	110.3	70	9.1	27.4
38	GL Decamer X-18	GACTAGGTGG	10	3108.04	29.5	113.1	60	8.8	27.5
39	GL Decamer X-19	TGGCAAGGCA	10	3077.02	29.5	115.7	60	8.6	26.6
40	GL Decamer X-20	CCCAGCTAGA	10	2996.98	29.5	107.5	60	9.3	27.9



Product Specification: Primer Data Sheet

GL RAPD Decamer 13 YZ Set

Catalog No. 40-0001-13

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer Y-01	GTGGCATCTC	10	3019	29.5	98.2	60	10.2	30.7
2	GL Decamer Y-02	CATGCCGCA	10	2972.97	33.6	99.5	70	10.1	29.9
3	GL Decamer Y-03	ACAGCCTGCT	10	2987.98	29.5	100.8	60	9.9	29.6
4	GL Decamer Y-04	GGCTGCAATG	10	3068.02	29.5	109	60	9.2	28.1
5	GL Decamer Y-05	GGCTGCGACA	10	3053.01	33.6	107.7	70	9.3	28.3
6	GL Decamer Y-06	AAGGCTCAC	10	2996.98	29.5	107.5	60	9.3	27.9
7	GL Decamer Y-07	AGAGCCGTCA	10	3037	29.5	111.6	60	9	27.2
8	GL Decamer Y-08	AGGCAGAGCA	10	3086.02	29.5	122.4	60	8.2	25.2
9	GL Decamer Y-09	AGCAGCGCAC	10	3021.99	33.6	110.3	70	9.1	27.4
10	GL Decamer Y-10	CAAACGTGGG	10	3077.02	29.5	115.7	60	8.6	26.6
11	GL Decamer Y-11	AGACGATGGG	10	3117.04	29.5	119.8	60	8.3	26
12	GL Decamer Y-12	AAGCCTGCGA	10	3037	29.5	111.6	60	9	27.2
13	GL Decamer Y-13	GGGTCTCGGT	10	3075.03	33.6	98.4	70	10.2	31.3
14	GL Decamer Y-14	GGTCGATCTG	10	3059.02	29.5	102.3	60	9.8	29.9
15	GL Decamer Y-15	AGTCGCCCTT	10	2978.98	29.5	94.1	60	10.6	31.7
16	GL Decamer Y-16	GGGCCAATGT	10	3068.02	29.5	109	60	9.2	28.1
17	GL Decamer Y-17	GACGTGGTGA	10	3108.04	29.5	113.1	60	8.8	27.5
18	GL Decamer Y-18	GTGGAGTCAG	10	3108.04	29.5	113.1	60	8.8	27.5
19	GL Decamer Y-19	TGAGGGTCCC	10	3044.01	33.6	101	70	9.9	30.1
20	GL Decamer Y-20	AGCCGTGGAA	10	3077.02	29.5	115.7	60	8.6	26.6
21	GL Decamer Z-01	TCTGTGCCAC	10	2978.98	29.5	94.1	60	10.6	31.7
22	GL Decamer Z-02	CCTACGGGA	10	3053.01	33.6	107.7	70	9.3	28.3
23	GL Decamer Z-03	CAGCACCGCA	10	2981.97	33.6	106.2	70	9.4	28.1
24	GL Decamer Z-04	AGGCTGTGCT	10	3059.02	29.5	102.3	60	9.8	29.9
25	GL Decamer Z-05	TCCCCATGCTG	10	2978.98	29.5	94.1	60	10.6	31.7
26	GL Decamer Z-06	GTGCCGTTCA	10	3019	29.5	98.2	60	10.2	30.7
27	GL Decamer Z-07	CCAGGAGGAC	10	3062.01	33.6	114.4	70	8.7	26.8
28	GL Decamer Z-08	GGGTGGGTAA	10	3148.06	29.5	117.2	60	8.5	26.9
29	GL Decamer Z-09	CACCCCCAGTC	10	2932.95	33.6	95.4	70	10.5	30.7
30	GL Decamer Z-10	CCGACAAACC	10	2965.96	29.5	110.1	60	9.1	26.9
31	GL Decamer Z-11	CTCAGTCGCA	10	2987.98	29.5	100.8	60	9.9	29.6
32	GL Decamer Z-12	TCAACGGGAC	10	3037	29.5	111.6	60	9	27.2
33	GL Decamer Z-13	GACTAACCCC	10	2996.98	29.5	107.5	60	9.3	27.9
34	GL Decamer Z-14	TCGGAGGTTC	10	3059.02	29.5	102.3	60	9.8	29.9
35	GL Decamer Z-15	CAGGGCTTTC	10	3019	29.5	98.2	60	10.2	30.7
36	GL Decamer Z-16	TCCCCATCAC	10	2907.94	29.5	92.6	60	10.8	31.4
37	GL Decamer Z-17	CCTTCCCACT	10	2898.94	29.5	85.9	60	11.6	33.7
38	GL Decamer Z-18	AGGGTCTGTG	10	3099.04	29.5	106.4	60	9.4	29.1
39	GL Decamer Z-19	GTGCGAGCAA	10	3077.02	29.5	115.7	60	8.6	26.6
40	GL Decamer Z-20	ACTTTGGCGG	10	3059.02	29.5	102.3	60	9.8	29.9



Product Specification: Primer Data Sheet

GL RAPD Decamer 14 AAAB Set

Catalog No. 40-0001-14

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer AA-01	AGACGGCTCC	10	3012.99	33.6	103.6	70	9.7	29.1
2	GL Decamer AA-02	GAGACCAGAC	10	3046	29.5	118.3	60	8.5	25.7
3	GL Decamer AA-03	TTAGCGCCCC	10	2963.97	33.6	92.8	70	10.8	31.9
4	GL Decamer AA-04	AGGACTGCTC	10	3028	29.5	104.9	60	9.5	28.9
5	GL Decamer AA-05	GGCTTTAGCC	10	3019	29.5	98.2	60	10.2	30.7
6	GL Decamer AA-06	GTGGGTGCCA	10	3084.03	33.6	105.1	70	9.5	29.3
7	GL Decamer AA-07	CTACGCTCAC	10	2947.96	29.5	96.7	60	10.3	30.5
8	GL Decamer AA-08	TCCGCAGTAG	10	3028	29.5	104.9	60	9.5	28.9
9	GL Decamer AA-09	AGATGGGCAG	10	3117.04	29.5	119.8	60	8.3	26
10	GL Decamer AA-10	TGGTCGGGTG	10	3115.05	33.6	102.5	70	9.8	30.4
11	GL Decamer AA-11	ACCCGACCTG	10	2972.97	33.6	99.5	70	10.1	29.9
12	GL Decamer AA-12	GGACCTCTTG	10	3019	29.5	98.2	60	10.2	30.7
13	GL Decamer AA-13	GAGCGTCGCT	10	3044.01	33.6	101	70	9.9	30.1
14	GL Decamer AA-14	AACGGGCCAA	10	3046	29.5	118.3	60	8.5	25.7
15	GL Decamer AA-15	ACGGAAGCCC	10	3021.99	33.6	110.3	70	9.1	27.4
16	GL Decamer AA-16	GGAAACCCACA	10	3005.98	29.5	114.2	60	8.8	26.3
17	GL Decamer AA-17	GAGCCCGACT	10	3012.99	33.6	103.6	70	9.7	29.1
18	GL Decamer AA-18	TGGTCCAGCC	10	3003.99	33.6	96.9	70	10.3	31
19	GL Decamer AA-19	TGAGGGCGTGT	10	3099.04	29.5	106.4	60	9.4	29.1
20	GL Decamer AA-20	TTGCCTTCGG	10	3010	29.5	91.5	60	10.9	32.9
21	GL Decamer AB-01	CCGTCGGTAG	10	3044.01	33.6	101	70	9.9	30.1
22	GL Decamer AB-02	GGAAACCCCT	10	2996.98	29.5	107.5	60	9.3	27.9
23	GL Decamer AB-03	TGGCGCACAC	10	3012.99	33.6	103.6	70	9.7	29.1
24	GL Decamer AB-04	GGCACGCGTT	10	3044.01	33.6	101	70	9.9	30.1
25	GL Decamer AB-05	CCCGAAGCGA	10	3021.99	33.6	110.3	70	9.1	27.4
26	GL Decamer AB-06	GTGGCTTGGA	10	3099.04	29.5	106.4	60	9.4	29.1
27	GL Decamer AB-07	GTAAACCGCC	10	2996.98	29.5	107.5	60	9.3	27.9
28	GL Decamer AB-08	GTTACGGACC	10	3028	29.5	104.9	60	9.5	28.9
29	GL Decamer AB-09	GGGCGACTAC	10	3053.01	33.6	107.7	70	9.3	28.3
30	GL Decamer AB-10	TTCCCTCCCA	10	2898.94	29.5	85.9	60	11.6	33.7
31	GL Decamer AB-11	GTGCGCAATG	10	3068.02	29.5	109	60	9.2	28.1
32	GL Decamer AB-12	CCTGTACCGA	10	2987.98	29.5	100.8	60	9.9	29.6
33	GL Decamer AB-13	CCTACCGTGG	10	3003.99	33.6	96.9	70	10.3	31
34	GL Decamer AB-14	AAGTGCAGCC	10	3037	29.5	111.6	60	9	27.2
35	GL Decamer AB-15	CCTCCTTCTC	10	2889.94	29.5	79.2	60	12.6	36.5
36	GL Decamer AB-16	CCCGGATGGT	10	3044.01	33.6	101	70	9.9	30.1
37	GL Decamer AB-17	TCGCATCCAG	10	2987.98	29.5	100.8	60	9.9	29.6
38	GL Decamer AB-18	CTGGCGTGTGTC	10	3035.01	33.6	94.3	70	10.6	32.2
39	GL Decamer AB-19	ACACCGATGG	10	3037	29.5	111.6	60	9	27.2
40	GL Decamer AB-20	CTTCTCGGAC	10	2978.98	29.5	94.1	60	10.6	31.7



Product Specification: Primer Data Sheet

GL RAPD Decamer 15 ACAD Set

Catalog No. 40-0001-15

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer AC-01	TCCCAGCAGA	10	2996.98	29.5	107.5	60	9.3	27.9
2	GL Decamer AC-02	GTCGTCGTCT	10	3010	29.5	91.5	60	10.9	32.9
3	GL Decamer AC-03	CACTGGCCCA	10	2972.97	33.6	99.5	70	10.1	29.9
4	GL Decamer AC-04	ACGGGACCTG	10	3053.01	33.6	107.7	70	9.3	28.3
5	GL Decamer AC-05	GTTAGTGCAG	10	3099.04	29.5	106.4	60	9.4	29.1
6	GL Decamer AC-06	CCAGAACGGA	10	3046	29.5	118.3	60	8.5	25.7
7	GL Decamer AC-07	GTGGCCGATG	10	3084.03	33.6	105.1	70	9.5	29.3
8	GL Decamer AC-08	TTTGGGTGCC	10	3050.02	29.5	95.6	60	10.5	31.9
9	GL Decamer AC-09	AGAGCGTACC	10	3037	29.5	111.6	60	9	27.2
10	GL Decamer AC-10	AGCAGCGAGG	10	3102.03	33.6	118.5	70	8.4	26.2
11	GL Decamer AC-11	CCTGGGTCAG	10	3044.01	33.6	101	70	9.9	30.1
12	GL Decamer AC-12	GGCGAGTGTG	10	3124.05	33.6	109.2	70	9.2	28.6
13	GL Decamer AC-13	GACCCGATTG	10	3028	29.5	104.9	60	9.5	28.9
14	GL Decamer AC-14	GTCGGTTGTC	10	3050.02	29.5	95.6	60	10.5	31.9
15	GL Decamer AC-15	TGCCGTGAGA	10	3068.02	29.5	109	60	9.2	28.1
16	GL Decamer AC-16	CCTCCTACGG	10	2963.97	33.6	92.8	70	10.8	31.9
17	GL Decamer AC-17	CCTGGAGCTT	10	3019	29.5	98.2	60	10.2	30.7
18	GL Decamer AC-18	TTGGGGGAGA	10	3148.06	29.5	117.2	60	8.5	26.9
19	GL Decamer AC-19	AGTCCGCCTG	10	3003.99	33.6	96.9	70	10.3	31
20	GL Decamer AC-20	ACGGAAGTGG	10	3117.04	29.5	119.8	60	8.3	26
21	GL Decamer AD-01	CAAAGGGCGG	10	3102.03	33.6	118.5	70	8.4	26.2
22	GL Decamer AD-02	CTGAACCGCT	10	2987.98	29.5	100.8	60	9.9	29.6
23	GL Decamer AD-03	TCTCGCCTAC	10	2938.96	29.5	90	60	11.1	32.7
24	GL Decamer AD-04	GTAGGCCTCA	10	3028	29.5	104.9	60	9.5	28.9
25	GL Decamer AD-05	ACCGCATGGG	10	3053.01	33.6	107.7	70	9.3	28.3
26	GL Decamer AD-06	AAGTGCACGG	10	3077.02	29.5	115.7	60	8.6	26.6
27	GL Decamer AD-07	CCCTACTGGT	10	2978.98	29.5	94.1	60	10.6	31.7
28	GL Decamer AD-08	GGCAGGCAAG	10	3102.03	33.6	118.5	70	8.4	26.2
29	GL Decamer AD-09	TCGCTTCTCC	10	2929.96	29.5	83.3	60	12	35.2
30	GL Decamer AD-10	AAGAGGCCAG	10	3086.02	29.5	122.4	60	8.2	25.2
31	GL Decamer AD-11	CAATCGGGTC	10	3028	29.5	104.9	60	9.5	28.9
32	GL Decamer AD-12	AAGAGGGCGT	10	3117.04	29.5	119.8	60	8.3	26
33	GL Decamer AD-13	GGTTCCCTCTG	10	3010	29.5	91.5	60	10.9	32.9
34	GL Decamer AD-14	GAACGAGGGT	10	3117.04	29.5	119.8	60	8.3	26
35	GL Decamer AD-15	TTTGCCCCGT	10	2969.98	29.5	87.4	60	11.4	34
36	GL Decamer AD-16	AACGGGCGTC	10	3053.01	33.6	107.7	70	9.3	28.3
37	GL Decamer AD-17	GGCAAACCGT	10	2996.98	29.5	107.5	60	9.3	27.9
38	GL Decamer AD-18	ACGAGAGGCA	10	3086.02	29.5	122.4	60	8.2	25.2
39	GL Decamer AD-19	CTTGGCACGA	10	3028	29.5	104.9	60	9.5	28.9
40	GL Decamer AD-20	TCTTCGGAGG	10	3059.02	29.5	102.3	60	9.8	29.9



Product Specification: Primer Data Sheet

GL RAPD Decamer 16 AEAf Set

Catalog No. 40-0001-16

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A ₂₆₀	ug/A ₂₆₀
1	GL Decamer AE-01	TGAGGGCCGT	10	3084.03	33.6	105.1	70	9.5	29.3
2	GL Decamer AE-02	TCGTTCACCC	10	2938.96	29.5	90	60	11.1	32.7
3	GL Decamer AE-03	CATAGAGCGG	10	3077.02	29.5	115.7	60	8.6	26.6
4	GL Decamer AE-04	CCAGCACTTC	10	2947.96	29.5	96.7	60	10.3	30.5
5	GL Decamer AE-05	CCTGTCAGTG	10	3019	29.5	98.2	60	10.2	30.7
6	GL Decamer AE-06	GGGGAAAGACA	10	3126.04	29.5	126.5	60	7.9	24.7
7	GL Decamer AE-07	GTGTCAGTGG	10	3099.04	29.5	106.4	60	9.4	29.1
8	GL Decamer AE-08	CTGGCTCAGA	10	3028	29.5	104.9	60	9.5	28.9
9	GL Decamer AE-09	TGCCACGAGG	10	3053.01	33.6	107.7	70	9.3	28.3
10	GL Decamer AE-10	CTGAAGCGCA	10	3037	29.5	111.6	60	9	27.2
11	GL Decamer AE-11	AAGACCAGGA	10	3086.02	29.5	122.4	60	8.2	25.2
12	GL Decamer AE-12	CCGAGCAATC	10	2996.98	29.5	107.5	60	9.3	27.9
13	GL Decamer AE-13	TGTGGACTGG	10	3099.04	29.5	106.4	60	9.4	29.1
14	GL Decamer AE-14	GAGAGGGCTCC	10	3053.01	33.6	107.7	70	9.3	28.3
15	GL Decamer AE-15	TGCCTGGACC	10	3003.99	33.6	96.9	70	10.3	31
16	GL Decamer AE-16	TCCGTGCTGA	10	3019	29.5	98.2	60	10.2	30.7
17	GL Decamer AE-17	GGCAGGTTCA	10	3068.02	29.5	109	60	9.2	28.1
18	GL Decamer AE-18	CTGGTGCTGA	10	3059.02	29.5	102.3	60	9.8	29.9
19	GL Decamer AE-19	GACAGTCCCT	10	2987.98	29.5	100.8	60	9.9	29.6
20	GL Decamer AE-20	TTGACCCCAG	10	2987.98	29.5	100.8	60	9.9	29.6
21	GL Decamer AF-01	CCTACACGGT	10	2987.98	29.5	100.8	60	9.9	29.6
22	GL Decamer AF-02	CAGCCGAGAA	10	3046	29.5	118.3	60	8.5	25.7
23	GL Decamer AF-03	GAAGGAGGCA	10	3126.04	29.5	126.5	60	7.9	24.7
24	GL Decamer AF-04	TTGCGGCTGA	10	3059.02	29.5	102.3	60	9.8	29.9
25	GL Decamer AF-05	CCCGATCAGA	10	2996.98	29.5	107.5	60	9.3	27.9
26	GL Decamer AF-06	CCGCAGTCTG	10	3003.99	33.6	96.9	70	10.3	31
27	GL Decamer AF-07	GGAAAGCGTC	10	3077.02	29.5	115.7	60	8.6	26.6
28	GL Decamer AF-08	CTCTGCCCTGA	10	2978.98	29.5	94.1	60	10.6	31.7
29	GL Decamer AF-09	CCCCTCAGAA	10	2956.96	29.5	103.4	60	9.7	28.6
30	GL Decamer AF-10	GGTTGGAGAC	10	3108.04	29.5	113.1	60	8.8	27.5
31	GL Decamer AF-11	ACTGGGCCTC	10	3003.99	33.6	96.9	70	10.3	31
32	GL Decamer AF-12	GACGCAGCTT	10	3028	29.5	104.9	60	9.5	28.9
33	GL Decamer AF-13	CCGAGGTGAC	10	3053.01	33.6	107.7	70	9.3	28.3
34	GL Decamer AF-14	GGTGCAGCACT	10	3044.01	33.6	101	70	9.9	30.1
35	GL Decamer AF-15	CACGAACCTC	10	2956.96	29.5	103.4	60	9.7	28.6
36	GL Decamer AF-16	TCCCCGGTGAG	10	3044.01	33.6	101	70	9.9	30.1
37	GL Decamer AF-17	TGAACCGAGG	10	3077.02	29.5	115.7	60	8.6	26.6
38	GL Decamer AF-18	GTGTCCCTCT	10	2969.98	29.5	87.4	60	11.4	34
39	GL Decamer AF-19	GGACAAGCAG	10	3086.02	29.5	122.4	60	8.2	25.2
40	GL Decamer AF-20	CTCCCGCACAG	10	2972.97	33.6	99.5	70	10.1	29.9



Product Specification: Primer Data Sheet

GL RAPD Decamer 17 AGAH Set

Catalog No. 40-0001-17

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer AG-01	CTACGGCTTC	10	2978.98	29.5	94.1	60	10.6	31.7
2	GL Decamer AG-02	CTGAGGTCCCT	10	3019	29.5	98.2	60	10.2	30.7
3	GL Decamer AG-03	TGCGGGAGTG	10	3124.05	33.6	109.2	70	9.2	28.6
4	GL Decamer AG-04	GGAGCGTACT	10	3068.02	29.5	109	60	9.2	28.1
5	GL Decamer AG-05	CCCACCTAGAC	10	2956.96	29.5	103.4	60	9.7	28.6
6	GL Decamer AG-06	GGTGGCCAAG	10	3093.03	33.6	111.8	70	8.9	27.7
7	GL Decamer AG-07	CACAGACCTG	10	2996.98	29.5	107.5	60	9.3	27.9
8	GL Decamer AG-08	AAGAGCCCTC	10	2996.98	29.5	107.5	60	9.3	27.9
9	GL Decamer AG-09	CCGAGGGGTT	10	3084.03	33.6	105.1	70	9.5	29.3
10	GL Decamer AG-10	ACTGCCCGAC	10	2972.97	33.6	99.5	70	10.1	29.9
11	GL Decamer AG-11	TTACGGTGGG	10	3099.04	29.5	106.4	60	9.4	29.1
12	GL Decamer AG-12	CTCCCAGGGT	10	3003.99	33.6	96.9	70	10.3	31
13	GL Decamer AG-13	GGCTTGGCGA	10	3084.03	33.6	105.1	70	9.5	29.3
14	GL Decamer AG-14	CTCTCGGCGA	10	3003.99	33.6	96.9	70	10.3	31
15	GL Decamer AG-15	CCCACACGCA	10	2941.95	33.6	102.1	70	9.8	28.8
16	GL Decamer AG-16	CCTGCGACAG	10	3012.99	33.6	103.6	70	9.7	29.1
17	GL Decamer AG-17	AGCGGAAGTG	10	3117.04	29.5	119.8	60	8.3	26
18	GL Decamer AG-18	GTGGGCATAC	10	3068.02	29.5	109	60	9.2	28.1
19	GL Decamer AG-19	AGCCTCGGTT	10	3019	29.5	98.2	60	10.2	30.7
20	GL Decamer AG-20	TGCGCTCCTC	10	2954.97	33.6	86.1	70	11.6	34.3
21	GL Decamer AH-01	TCCGCAACCA	10	2956.96	29.5	103.4	60	9.7	28.6
22	GL Decamer AH-02	CACTTCCGCT	10	2938.96	29.5	90	60	11.1	32.7
23	GL Decamer AH-03	GGTTACTGCC	10	3019	29.5	98.2	60	10.2	30.7
24	GL Decamer AH-04	CTCCCCAGAC	10	2932.95	33.6	95.4	70	10.5	30.7
25	GL Decamer AH-05	TTGCAGGCAG	10	3068.02	29.5	109	60	9.2	28.1
26	GL Decamer AH-06	GTAAGCCCCCT	10	2987.98	29.5	100.8	60	9.9	29.6
27	GL Decamer AH-07	CCCTACGGAG	10	3012.99	33.6	103.6	70	9.7	29.1
28	GL Decamer AH-08	TTCCCGTGCC	10	2954.97	33.6	86.1	70	11.6	34.3
29	GL Decamer AH-09	AGAACCGAGG	10	3086.02	29.5	122.4	60	8.2	25.2
30	GL Decamer AH-10	GGGATGACCA	10	3077.02	29.5	115.7	60	8.6	26.6
31	GL Decamer AH-11	TCCGCTGAGA	10	3028	29.5	104.9	60	9.5	28.9
32	GL Decamer AH-12	TCCAACGGCT	10	2987.98	29.5	100.8	60	9.9	29.6
33	GL Decamer AH-13	TGAGTCCGCA	10	3028	29.5	104.9	60	9.5	28.9
34	GL Decamer AH-14	TGTGGCCGAA	10	3068.02	29.5	109	60	9.2	28.1
35	GL Decamer AH-15	CTACAGCGAG	10	3037	29.5	111.6	60	9	27.2
36	GL Decamer AH-16	CAAGGTGGGT	10	3108.04	29.5	113.1	60	8.8	27.5
37	GL Decamer AH-17	CAGTGGGGAG	10	3133.05	33.6	115.9	70	8.6	27
38	GL Decamer AH-18	GGGCTAGTCA	10	3068.02	29.5	109	60	9.2	28.1
39	GL Decamer AH-19	GGCAGTTCTC	10	3019	29.5	98.2	60	10.2	30.7
40	GL Decamer AH-20	GGAAGGTGAG	10	3157.06	29.5	123.9	60	8.1	25.5



Product Specification: Primer Data Sheet

GL RAPD Decamer 18 AIAJ Set

Catalog No. 40-0001-18

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer AI-01	GGCATGGCT	10	3044.01	33.6	101	70	9.9	30.1
2	GL Decamer AI-02	AGCCGTCAG	10	3028	29.5	104.9	60	9.5	28.9
3	GL Decamer AI-03	GGGTCCAAG	10	3077.02	29.5	115.7	60	8.6	26.6
4	GL Decamer AI-04	CTATCCTGCC	10	2938.96	29.5	90	60	11.1	32.7
5	GL Decamer AI-05	GTCGTAGCGG	10	3084.03	33.6	105.1	70	9.5	29.3
6	GL Decamer AI-06	TGCCGCACTT	10	2978.98	29.5	94.1	60	10.6	31.7
7	GL Decamer AI-07	ACGAGCATGG	10	3077.02	29.5	115.7	60	8.6	26.6
8	GL Decamer AI-08	AAGCCCCCA	10	2941.95	33.6	102.1	70	9.8	28.8
9	GL Decamer AI-09	TCGCTGGTGT	10	3050.02	29.5	95.6	60	10.5	31.9
10	GL Decamer AI-10	TCGGGGCATC	10	3044.01	33.6	101	70	9.9	30.1
11	GL Decamer AI-11	ACGGCGATGA	10	3077.02	29.5	115.7	60	8.6	26.6
12	GL Decamer AI-12	GACCGGAACC	10	3021.99	33.6	110.3	70	9.1	27.4
13	GL Decamer AI-13	ACGCTGCGAC	10	3012.99	33.6	103.6	70	9.7	29.1
14	GL Decamer AI-14	TGGTGCACTC	10	3019	29.5	98.2	60	10.2	30.7
15	GL Decamer AI-15	GACACAGCCC	10	2981.97	33.6	106.2	70	9.4	28.1
16	GL Decamer AI-16	AAGGCACGAG	10	3086.02	29.5	122.4	60	8.2	25.2
17	GL Decamer AI-17	CCTCACGTCC	10	2923.95	33.6	88.7	70	11.3	33
18	GL Decamer AI-18	TCGCGGAACC	10	3012.99	33.6	103.6	70	9.7	29.1
19	GL Decamer AI-19	GGCAAAGCTG	10	3077.02	29.5	115.7	60	8.6	26.6
20	GL Decamer AI-20	CCTGTTCCCT	10	2929.96	29.5	83.3	60	12	35.2
21	GL Decamer AJ-01	ACGGGTCAAG	10	3077.02	29.5	115.7	60	8.6	26.6
22	GL Decamer AJ-02	TCGCACAGTC	10	2987.98	29.5	100.8	60	9.9	29.6
23	GL Decamer AJ-03	AGCACCTCGT	10	2987.98	29.5	100.8	60	9.9	29.6
24	GL Decamer AJ-04	GAATGCGACC	10	3037	29.5	111.6	60	9	27.2
25	GL Decamer AJ-05	CAGCGTTGCC	10	3003.99	33.6	96.9	70	10.3	31
26	GL Decamer AJ-06	GTGGAGTGG	10	3124.05	33.6	109.2	70	9.2	28.6
27	GL Decamer AJ-07	CCCTCCCTAA	10	2907.94	29.5	92.6	60	10.8	31.4
28	GL Decamer AJ-08	GTGCTCCCTC	10	2954.97	33.6	86.1	70	11.6	34.3
29	GL Decamer AJ-09	ACGGCACGCA	10	3021.99	33.6	110.3	70	9.1	27.4
30	GL Decamer AJ-10	GTTACCGCGA	10	3028	29.5	104.9	60	9.5	28.9
31	GL Decamer AJ-11	GAACGCTGCC	10	3012.99	33.6	103.6	70	9.7	29.1
32	GL Decamer AJ-12	CAGTTCCCGT	10	2978.98	29.5	94.1	60	10.6	31.7
33	GL Decamer AJ-13	CAGCCGTTCC	10	2963.97	33.6	92.8	70	10.8	31.9
34	GL Decamer AJ-14	ACCGATGCTG	10	3028	29.5	104.9	60	9.5	28.9
35	GL Decamer AJ-15	GAATCCGGCA	10	3037	29.5	111.6	60	9	27.2
36	GL Decamer AJ-16	TCTGGACCGA	10	3028	29.5	104.9	60	9.5	28.9
37	GL Decamer AJ-17	ACCCCCTATG	10	2947.96	29.5	96.7	60	10.3	30.5
38	GL Decamer AJ-18	GGCTAGGTGG	10	3124.05	33.6	109.2	70	9.2	28.6
39	GL Decamer AJ-19	ACAGTGGCCT	10	3028	29.5	104.9	60	9.5	28.9
40	GL Decamer AJ-20	ACACGTGGTC	10	3028	29.5	104.9	60	9.5	28.9



Product Specification: Primer Data Sheet

GL RAPD Decamer 19 AKAL Set

Catalog No. 40-0001-19

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer AK-01	TCTGCTACGG	10	3019	29.5	98.2	60	10.2	30.7
2	GL Decamer AK-02	CCATCGGAGG	10	3053.01	33.6	107.7	70	9.3	28.3
3	GL Decamer AK-03	GGTCCTACCA	10	2987.98	29.5	100.8	60	9.9	29.6
4	GL Decamer AK-04	AGGGTCGGTC	10	3084.03	33.6	105.1	70	9.5	29.3
5	GL Decamer AK-05	GATGGCAGTC	10	3068.02	29.5	109	60	9.2	28.1
6	GL Decamer AK-06	TCACGTCCCT	10	2938.96	29.5	90	60	11.1	32.7
7	GL Decamer AK-07	CTTGGGGGAC	10	3084.03	33.6	105.1	70	9.5	29.3
8	GL Decamer AK-08	CCGAAGGGTG	10	3093.03	33.6	111.8	70	8.9	27.7
9	GL Decamer AK-09	AGGTCGGCGT	10	3084.03	33.6	105.1	70	9.5	29.3
10	GL Decamer AK-10	CAAGCGTCAC	10	2996.98	29.5	107.5	60	9.3	27.9
11	GL Decamer AK-11	CAGTGTGCTC	10	3019	29.5	98.2	60	10.2	30.7
12	GL Decamer AK-12	AGTGTAGCCC	10	3028	29.5	104.9	60	9.5	28.9
13	GL Decamer AK-13	TCCCCACGAGT	10	2987.98	29.5	100.8	60	9.9	29.6
14	GL Decamer AK-14	CTGTCATGCC	10	2978.98	29.5	94.1	60	10.6	31.7
15	GL Decamer AK-15	ACCTGCCGTT	10	2978.98	29.5	94.1	60	10.6	31.7
16	GL Decamer AK-16	CTGCGTGCTC	10	2994.99	33.6	90.2	70	11.1	33.2
17	GL Decamer AK-17	CAGCGGTCAC	10	3012.99	33.6	103.6	70	9.7	29.1
18	GL Decamer AK-18	ACCCGGAAAC	10	3005.98	29.5	114.2	60	8.8	26.3
19	GL Decamer AK-19	TCGCAGCGAG	10	3053.01	33.6	107.7	70	9.3	28.3
20	GL Decamer AK-20	TGATGGCGTC	10	3059.02	29.5	102.3	60	9.8	29.9
21	GL Decamer AL-01	TGTGACGAGG	10	3108.04	29.5	113.1	60	8.8	27.5
22	GL Decamer AL-02	ACCCTGTGGG	10	3044.01	33.6	101	70	9.9	30.1
23	GL Decamer AL-03	CCCACCCCTTG	10	2923.95	33.6	88.7	70	11.3	33
24	GL Decamer AL-04	ACAACGGTCC	10	2996.98	29.5	107.5	60	9.3	27.9
25	GL Decamer AL-05	GACTGCGCCA	10	3012.99	33.6	103.6	70	9.7	29.1
26	GL Decamer AL-06	AAGCGTCCTC	10	2987.98	29.5	100.8	60	9.9	29.6
27	GL Decamer AL-07	CCGTCATCC	10	2923.95	33.6	88.7	70	11.3	33
28	GL Decamer AL-08	GTCGCCCTCA	10	2963.97	33.6	92.8	70	10.8	31.9
29	GL Decamer AL-09	CAGCGAGTAG	10	3077.02	29.5	115.7	60	8.6	26.6
30	GL Decamer AL-10	AAGGCCCTG	10	3012.99	33.6	103.6	70	9.7	29.1
31	GL Decamer AL-11	GTCACGTCT	10	2978.98	29.5	94.1	60	10.6	31.7
32	GL Decamer AL-12	CCCAGGCTAC	10	2972.97	33.6	99.5	70	10.1	29.9
33	GL Decamer AL-13	GAATGGCAC	10	3037	29.5	111.6	60	9	27.2
34	GL Decamer AL-14	TCGCTCCGTT	10	2969.98	29.5	87.4	60	11.4	34
35	GL Decamer AL-15	AGGGGACACC	10	3062.01	33.6	114.4	70	8.7	26.8
36	GL Decamer AL-16	CTTCGAGGG	10	3059.02	29.5	102.3	60	9.8	29.9
37	GL Decamer AL-17	CCGCAAGTGT	10	3028	29.5	104.9	60	9.5	28.9
38	GL Decamer AL-18	GGAGTGGACT	10	3108.04	29.5	113.1	60	8.8	27.5
39	GL Decamer AL-19	TCTGCCAGTG	10	3019	29.5	98.2	60	10.2	30.7
40	GL Decamer AL-20	AGGAGTCGGA	10	3117.04	29.5	119.8	60	8.3	26



Product Specification: Primer Data Sheet

GL RAPD Decamer 20 AMAN Set

Catalog No. 40-0001-20

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer AM-01	TCACGTACGG	10	3028	29.5	104.9	60	9.5	28.9
2	GL Decamer AM-02	ACTTGACGGG	10	3068.02	29.5	109	60	9.2	28.1
3	GL Decamer AM-03	CTTCCCTGTG	10	2969.98	29.5	87.4	60	11.4	34
4	GL Decamer AM-04	GAGGGACCTC	10	3053.01	33.6	107.7	70	9.3	28.3
5	GL Decamer AM-05	GGGCTATGCC	10	3044.01	33.6	101	70	9.9	30.1
6	GL Decamer AM-06	CTCGGGATGT	10	3059.02	29.5	102.3	60	9.8	29.9
7	GL Decamer AM-07	AACCGCGGCA	10	3021.99	33.6	110.3	70	9.1	27.4
8	GL Decamer AM-08	ACCACGAGTG	10	3037	29.5	111.6	60	9	27.2
9	GL Decamer AM-09	TGCCGGTTCA	10	3019	29.5	98.2	60	10.2	30.7
10	GL Decamer AM-10	CAGACCGACC	10	2981.97	33.6	106.2	70	9.4	28.1
11	GL Decamer AM-11	AGATGCGCGG	10	3093.03	33.6	111.8	70	8.9	27.7
12	GL Decamer AM-12	TCTCACCGTC	10	2938.96	29.5	90	60	11.1	32.7
13	GL Decamer AM-13	CACGGCACAA	10	3005.98	29.5	114.2	60	8.8	26.3
14	GL Decamer AM-14	TGGTTGCGGA	10	3099.04	29.5	106.4	60	9.4	29.1
15	GL Decamer AM-15	GATGCGATGG	10	3108.04	29.5	113.1	60	8.8	27.5
16	GL Decamer AM-16	TGGCGGTTG	10	3090.04	29.5	99.7	60	10	31
17	GL Decamer AM-17	CCTAACGTCC	10	2947.96	29.5	96.7	60	10.3	30.5
18	GL Decamer AM-18	ACGGGACTCT	10	3028	29.5	104.9	60	9.5	28.9
19	GL Decamer AM-19	CCAGGTCTTC	10	2978.98	29.5	94.1	60	10.6	31.7
20	GL Decamer AM-20	ACCAACCAGG	10	3005.98	29.5	114.2	60	8.8	26.3
21	GL Decamer AN-01	ACTCCACGTC	10	2947.96	29.5	96.7	60	10.3	30.5
22	GL Decamer AN-02	CACCGCAGTT	10	2987.98	29.5	100.8	60	9.9	29.6
23	GL Decamer AN-03	AGCCAGGCTG	10	3053.01	33.6	107.7	70	9.3	28.3
24	GL Decamer AN-04	GGCGTAAAGTC	10	3068.02	29.5	109	60	9.2	28.1
25	GL Decamer AN-05	GGGTGCAGTT	10	3099.04	29.5	106.4	60	9.4	29.1
26	GL Decamer AN-06	GGGAACCGGT	10	3053.01	33.6	107.7	70	9.3	28.3
27	GL Decamer AN-07	TCGCTGCGGA	10	3044.01	33.6	101	70	9.9	30.1
28	GL Decamer AN-08	AAGGCTGCTG	10	3068.02	29.5	109	60	9.2	28.1
29	GL Decamer AN-09	GGGGGAGATG	10	3173.07	33.6	120	70	8.3	26.4
30	GL Decamer AN-10	CTGTGTGCTC	10	3010	29.5	91.5	60	10.9	32.9
31	GL Decamer AN-11	GTCCATGCAG	10	3028	29.5	104.9	60	9.5	28.9
32	GL Decamer AN-12	AACGGCGGTC	10	3053.01	33.6	107.7	70	9.3	28.3
33	GL Decamer AN-13	CTTCCAGGAC	10	2987.98	29.5	100.8	60	9.9	29.6
34	GL Decamer AN-14	AGCCGGGTAA	10	3077.02	29.5	115.7	60	8.6	26.6
35	GL Decamer AN-15	TGATGCCGCT	10	3019	29.5	98.2	60	10.2	30.7
36	GL Decamer AN-16	GTGTCGAGTC	10	3059.02	29.5	102.3	60	9.8	29.9
37	GL Decamer AN-17	TCAGCACAGG	10	3037	29.5	111.6	60	9	27.2
38	GL Decamer AN-18	TGTCCTGCGT	10	3010	29.5	91.5	60	10.9	32.9
39	GL Decamer AN-19	ACCACGCCCT	10	2947.96	29.5	96.7	60	10.3	30.5
40	GL Decamer AN-20	GAGTCCTCAC	10	2987.98	29.5	100.8	60	9.9	29.6



Product Specification: Primer Data Sheet

GL RAPD Decamer 21 AOAP Set

Catalog No. 40-0001-21

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer AO-01	AAGACGACGG	10	3086.02	29.5	122.4	60	8.2	25.2
2	GL Decamer AO-02	AATCCGCTGG	10	3028	29.5	104.9	60	9.5	28.9
3	GL Decamer AO-03	AGTCGGCCCCA	10	3012.99	33.6	103.6	70	9.7	29.1
4	GL Decamer AO-04	AACAGGGCAG	10	3086.02	29.5	122.4	60	8.2	25.2
5	GL Decamer AO-05	TGGAAAGCACC	10	3037	29.5	111.6	60	9	27.2
6	GL Decamer AO-06	AGGCAGCCTG	10	3053.01	33.6	107.7	70	9.3	28.3
7	GL Decamer AO-07	GATGCGACGG	10	3093.03	33.6	111.8	70	8.9	27.7
8	GL Decamer AO-08	ACTGGCTCTC	10	2978.98	29.5	94.1	60	10.6	31.7
9	GL Decamer AO-09	CCAGATGGGG	10	3093.03	33.6	111.8	70	8.9	27.7
10	GL Decamer AO-10	GACATCGTCC	10	2987.98	29.5	100.8	60	9.9	29.6
11	GL Decamer AO-11	GGGGGCTTGA	10	3124.05	33.6	109.2	70	9.2	28.6
12	GL Decamer AO-12	TCCCCGGTCTC	10	2954.97	33.6	86.1	70	11.6	34.3
13	GL Decamer AO-13	CCCACAGGTG	10	3012.99	33.6	103.6	70	9.7	29.1
14	GL Decamer AO-14	CTACTGGGGT	10	3059.02	29.5	102.3	60	9.8	29.9
15	GL Decamer AO-15	GAAGGCTCCC	10	3012.99	33.6	103.6	70	9.7	29.1
16	GL Decamer AO-16	CACAAACGGGA	10	3046	29.5	118.3	60	8.5	25.7
17	GL Decamer AO-17	CCCATGTGTG	10	3019	29.5	98.2	60	10.2	30.7
18	GL Decamer AO-18	GGGAGCGCTT	10	3084.03	33.6	105.1	70	9.5	29.3
19	GL Decamer AO-19	GTTCTCGGAC	10	3019	29.5	98.2	60	10.2	30.7
20	GL Decamer AO-20	GGCTTGCCTG	10	3035.01	33.6	94.3	70	10.6	32.2
21	GL Decamer AP-01	AACTGGCCCC	10	2972.97	33.6	99.5	70	10.1	29.9
22	GL Decamer AP-02	TGGTCATCCC	10	2978.98	29.5	94.1	60	10.6	31.7
23	GL Decamer AP-03	GTAAGGCGCA	10	3077.02	29.5	115.7	60	8.6	26.6
24	GL Decamer AP-04	CTCTTGGGCT	10	3010	29.5	91.5	60	10.9	32.9
25	GL Decamer AP-05	GACTTCAGGG	10	3068.02	29.5	109	60	9.2	28.1
26	GL Decamer AP-06	GTCACGTCTC	10	2978.98	29.5	94.1	60	10.6	31.7
27	GL Decamer AP-07	ACCACCCGCT	10	2932.95	33.6	95.4	70	10.5	30.7
28	GL Decamer AP-08	ACCCCCACAC	10	2901.93	33.6	98	70	10.2	29.6
29	GL Decamer AP-09	GTGGTCCAGA	10	3068.02	29.5	109	60	9.2	28.1
30	GL Decamer AP-10	TGGGTGATCC	10	3059.02	29.5	102.3	60	9.8	29.9
31	GL Decamer AP-11	CTGGCTTCTG	10	3010	29.5	91.5	60	10.9	32.9
32	GL Decamer AP-12	GTCTTACCCC	10	2938.96	29.5	90	60	11.1	32.7
33	GL Decamer AP-13	TGAAGCCCT	10	2987.98	29.5	100.8	60	9.9	29.6
34	GL Decamer AP-14	TGCCATGCTG	10	3019	29.5	98.2	60	10.2	30.7
35	GL Decamer AP-15	GGGTTGGAAG	10	3148.06	29.5	117.2	60	8.5	26.9
36	GL Decamer AP-16	GGGCAGATAC	10	3077.02	29.5	115.7	60	8.6	26.6
37	GL Decamer AP-17	ACGGCACTCC	10	2972.97	33.6	99.5	70	10.1	29.9
38	GL Decamer AP-18	GTCGTCGACA	10	3028	29.5	104.9	60	9.5	28.9
39	GL Decamer AP-19	GTGTCTGCCT	10	3010	29.5	91.5	60	10.9	32.9
40	GL Decamer AP-20	CCCGGATACA	10	2996.98	29.5	107.5	60	9.3	27.9



Product Specification: Primer Data Sheet

GL RAPD Decamer 22 AQAR Set

Catalog No. 40-0001-22

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer AQ-01	GGCAGGTGGA	10	3133.05	33.6	115.9	70	8.6	27
2	GL Decamer AQ-02	ACCCTCGGAC	10	2972.97	33.6	99.5	70	10.1	29.9
3	GL Decamer AQ-03	GAGGTGTCG	10	3099.04	29.5	106.4	60	9.4	29.1
4	GL Decamer AQ-04	GACGGCTATC	10	3028	29.5	104.9	60	9.5	28.9
5	GL Decamer AQ-05	ACGGAGCTGA	10	3077.02	29.5	115.7	60	8.6	26.6
6	GL Decamer AQ-06	ACGGATCCCC	10	2972.97	33.6	99.5	70	10.1	29.9
7	GL Decamer AQ-07	GGAGTAACGG	10	3117.04	29.5	119.8	60	8.3	26
8	GL Decamer AQ-08	TCGGTAGACC	10	3028	29.5	104.9	60	9.5	28.9
9	GL Decamer AQ-09	AGTCCCCCTC	10	2923.95	33.6	88.7	70	11.3	33
10	GL Decamer AQ-10	CATACCCCTCC	10	2907.94	29.5	92.6	60	10.8	31.4
11	GL Decamer AQ-11	GACGCCCTCCA	10	2972.97	33.6	99.5	70	10.1	29.9
12	GL Decamer AQ-12	CAGCTCTGT	10	2978.98	29.5	94.1	60	10.6	31.7
13	GL Decamer AQ-13	GAGTCGGCTG	10	3084.03	33.6	105.1	70	9.5	29.3
14	GL Decamer AQ-14	CCCGTGTAGG	10	3044.01	33.6	101	70	9.9	30.1
15	GL Decamer AQ-15	TGCGATGCGA	10	3068.02	29.5	109	60	9.2	28.1
16	GL Decamer AQ-16	CCCGGAAGAG	10	3062.01	33.6	114.4	70	8.7	26.8
17	GL Decamer AQ-17	TTCGCCTGTC	10	2969.98	29.5	87.4	60	11.4	34
18	GL Decamer AQ-18	GGGAGCGAGT	10	3133.05	33.6	115.9	70	8.6	27
19	GL Decamer AQ-19	AGTAGGGCCT	10	3068.02	29.5	109	60	9.2	28.1
20	GL Decamer AQ-20	GTGAACGCTC	10	3028	29.5	104.9	60	9.5	28.9
21	GL Decamer AR-01	CCATTCCGAG	10	2987.98	29.5	100.8	60	9.9	29.6
22	GL Decamer AR-02	CACCTGCTGA	10	2987.98	29.5	100.8	60	9.9	29.6
23	GL Decamer AR-03	GTGAGGCGCA	10	3093.03	33.6	111.8	70	8.9	27.7
24	GL Decamer AR-04	CCAGGAGAAG	10	3086.02	29.5	122.4	60	8.2	25.2
25	GL Decamer AR-05	CATACTGCC	10	2947.96	29.5	96.7	60	10.3	30.5
26	GL Decamer AR-06	TGGGGCTCAA	10	3068.02	29.5	109	60	9.2	28.1
27	GL Decamer AR-07	TCCTTCGGTG	10	3010	29.5	91.5	60	10.9	32.9
28	GL Decamer AR-08	GTGAATGCGG	10	3108.04	29.5	113.1	60	8.8	27.5
29	GL Decamer AR-09	TGCGCCATCC	10	2963.97	33.6	92.8	70	10.8	31.9
30	GL Decamer AR-10	TGCGCCATCC	10	2963.97	33.6	92.8	70	10.8	31.9
31	GL Decamer AR-11	TGCGCCATCC	10	2963.97	33.6	92.8	70	10.8	31.9
32	GL Decamer AR-12	TGCGCCATCC	10	2963.97	33.6	92.8	70	10.8	31.9
33	GL Decamer AR-13	TGCGCCATCC	10	2963.97	33.6	92.8	70	10.8	31.9
34	GL Decamer AR-14	TGCGCCATCC	10	2963.97	33.6	92.8	70	10.8	31.9
35	GL Decamer AR-15	TGCGCCATCC	10	2963.97	33.6	92.8	70	10.8	31.9
36	GL Decamer AR-16	TGCGCCATCC	10	2963.97	33.6	92.8	70	10.8	31.9
37	GL Decamer AR-17	TGCGCCATCC	10	2963.97	33.6	92.8	70	10.8	31.9
38	GL Decamer AR-18	TGCGCCATCC	10	2963.97	33.6	92.8	70	10.8	31.9
39	GL Decamer AR-19	TGCGCCATCC	10	2963.97	33.6	92.8	70	10.8	31.9
40	GL Decamer AR-20	TGCGCCATCC	10	2963.97	33.6	92.8	70	10.8	31.9



Product Specification: Primer Data Sheet

GL RAPD Decamer 23 ASAT Set

Catalog No. 40-0001-23

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer AS-01	CACACCGTGT	10	2987.98	29.5	100.8	60	9.9	29.6
2	GL Decamer AS-02	GTCCTCGTGT	10	3010	29.5	91.5	60	10.9	32.9
3	GL Decamer AS-03	ACGGTTCCAC	10	2987.98	29.5	100.8	60	9.9	29.6
4	GL Decamer AS-04	GTCTTGGGCA	10	3059.02	29.5	102.3	60	9.8	29.9
5	GL Decamer AS-05	GTCACCTGCT	10	2978.98	29.5	94.1	60	10.6	31.7
6	GL Decamer AS-06	GGCGCGTTAG	10	3084.03	33.6	105.1	70	9.5	29.3
7	GL Decamer AS-07	GACGAGCAGG	10	3102.03	33.6	118.5	70	8.4	26.2
8	GL Decamer AS-08	GGCTGCCAGT	10	3044.01	33.6	101	70	9.9	30.1
9	GL Decamer AS-09	TGGAGTCCCC	10	3003.99	33.6	96.9	70	10.3	31
10	GL Decamer AS-10	CCCGTCTACC	10	2923.95	33.6	88.7	70	11.3	33
11	GL Decamer AS-11	ACCGTGCCGT	10	3003.99	33.6	96.9	70	10.3	31
12	GL Decamer AS-12	TGACCAGGCA	10	3037	29.5	111.6	60	9	27.2
13	GL Decamer AS-13	CACGGACCGA	10	3021.99	33.6	110.3	70	9.1	27.4
14	GL Decamer AS-14	TCGCAGCGTT	10	3019	29.5	98.2	60	10.2	30.7
15	GL Decamer AS-15	CTGCAATGGG	10	3068.02	29.5	109	60	9.2	28.1
16	GL Decamer AS-16	AACCCTTCCC	10	2907.94	29.5	92.6	60	10.8	31.4
17	GL Decamer AS-17	AGTCCCGCGA	10	3028	29.5	104.9	60	9.5	28.9
18	GL Decamer AS-18	GTTGCGCAGT	10	3059.02	29.5	102.3	60	9.8	29.9
19	GL Decamer AS-19	TGACAGCCCC	10	2972.97	33.6	99.5	70	10.1	29.9
20	GL Decamer AS-20	TCTGCCCTGGA	10	3019	29.5	98.2	60	10.2	30.7
21	GL Decamer AT-01	CAGTGGTTCC	10	3019	29.5	98.2	60	10.2	30.7
22	GL Decamer AT-02	CAGGTCTAGG	10	3068.02	29.5	109	60	9.2	28.1
23	GL Decamer AT-03	GAATGGGAGG	10	3133.05	33.6	115.9	70	8.6	27
24	GL Decamer AT-04	TTGCCTCGCC	10	2954.97	33.6	86.1	70	11.6	34.3
25	GL Decamer AT-05	ACACCTGCCA	10	2956.96	29.5	103.4	60	9.7	28.6
26	GL Decamer AT-06	CCGTCCCTGA	10	2963.97	33.6	92.8	70	10.8	31.9
27	GL Decamer AT-07	ACTGCGACCA	10	2996.98	29.5	107.5	60	9.3	27.9
28	GL Decamer AT-08	TCCTCGTGGG	10	3035.01	33.6	94.3	70	10.6	32.2
29	GL Decamer AT-09	CCGTTAGCGT	10	3019	29.5	98.2	60	10.2	30.7
30	GL Decamer AT-10	ACCTCCGGTC	10	2963.97	33.6	92.8	70	10.8	31.9
31	GL Decamer AT-11	CCAGATCTCC	10	2947.96	29.5	96.7	60	10.3	30.5
32	GL Decamer AT-12	CTGCCTAGCC	10	2963.97	33.6	92.8	70	10.8	31.9
33	GL Decamer AT-13	CTGGTGAAG	10	3108.04	29.5	113.1	60	8.8	27.5
34	GL Decamer AT-14	GTGCCGCACT	10	3003.99	33.6	96.9	70	10.3	31
35	GL Decamer AT-15	TGACGCACGG	10	3053.01	33.6	107.7	70	9.3	28.3
36	GL Decamer AT-16	CTCTCCGTAG	10	2978.98	29.5	94.1	60	10.6	31.7
37	GL Decamer AT-17	AGCGACTGCT	10	3028	29.5	104.9	60	9.5	28.9
38	GL Decamer AT-18	CCAGCTGTGA	10	3028	29.5	104.9	60	9.5	28.9
39	GL Decamer AT-19	ACCAAGGCAC	10	3005.98	29.5	114.2	60	8.8	26.3
40	GL Decamer AT-20	ACATCAGCCC	10	2956.96	29.5	103.4	60	9.7	28.6



Product Specification: Primer Data Sheet

GL RAPD Decamer 24 AUAV Set

Catalog No. 40-0001-24

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer AU-01	GGGATGGAAC	10	3117.04	29.5	119.8	60	8.3	26
2	GL Decamer AU-02	CCAACCCGCA	10	2941.95	33.6	102.1	70	9.8	28.8
3	GL Decamer AU-03	ACGAAACGGG	10	3086.02	29.5	122.4	60	8.2	25.2
4	GL Decamer AU-04	GGCTTCTGTC	10	3010	29.5	91.5	60	10.9	32.9
5	GL Decamer AU-05	GAGCTACCGT	10	3028	29.5	104.9	60	9.5	28.9
6	GL Decamer AU-06	TCTCTAGGGG	10	3059.02	29.5	102.3	60	9.8	29.9
7	GL Decamer AU-07	AGACCCTTGG	10	3028	29.5	104.9	60	9.5	28.9
8	GL Decamer AU-08	CACCGATCCA	10	2956.96	29.5	103.4	60	9.7	28.6
9	GL Decamer AU-09	ACGGCCAATC	10	2996.98	29.5	107.5	60	9.3	27.9
10	GL Decamer AU-10	GGCGTATGGT	10	3099.04	29.5	106.4	60	9.4	29.1
11	GL Decamer AU-11	CTTCTCGGTC	10	2969.98	29.5	87.4	60	11.4	34
12	GL Decamer AU-12	CCACTCGTGT	10	2978.98	29.5	94.1	60	10.6	31.7
13	GL Decamer AU-13	CCAAGCACAC	10	2965.96	29.5	110.1	60	9.1	26.9
14	GL Decamer AU-14	CACCTCGACC	10	2932.95	33.6	95.4	70	10.5	30.7
15	GL Decamer AU-15	TGCTGACGAC	10	3028	29.5	104.9	60	9.5	28.9
16	GL Decamer AU-16	TCTTAGGCCG	10	3059.02	29.5	102.3	60	9.8	29.9
17	GL Decamer AU-17	TTGGCATCCC	10	2978.98	29.5	94.1	60	10.6	31.7
18	GL Decamer AU-18	CACCACTAGG	10	2996.98	29.5	107.5	60	9.3	27.9
19	GL Decamer AU-19	AGCCTGGGGA	10	3093.03	33.6	111.8	70	8.9	27.7
20	GL Decamer AU-20	GTCGAAACCC	10	2996.98	29.5	107.5	60	9.3	27.9
21	GL Decamer AV-01	TGAGGGGGAA	10	3157.06	29.5	123.9	60	8.1	25.5
22	GL Decamer AV-02	TCACCGTGTC	10	2978.98	29.5	94.1	60	10.6	31.7
23	GL Decamer AV-03	TGTAGCCGTG	10	3059.02	29.5	102.3	60	9.8	29.9
24	GL Decamer AV-04	TCTGCCATCC	10	2938.96	29.5	90	60	11.1	32.7
25	GL Decamer AV-05	GTGAGCGTGG	10	3124.05	33.6	109.2	70	9.2	28.6
26	GL Decamer AV-06	CCCGAGATCC	10	2972.97	33.6	99.5	70	10.1	29.9
27	GL Decamer AV-07	CTACCAGGGA	10	3037	29.5	111.6	60	9	27.2
28	GL Decamer AV-08	TGAGAAGCGG	10	3117.04	29.5	119.8	60	8.3	26
29	GL Decamer AV-09	GAGGTCTTAC	10	3028	29.5	104.9	60	9.5	28.9
30	GL Decamer AV-10	ACCCCTGGCA	10	2972.97	33.6	99.5	70	10.1	29.9
31	GL Decamer AV-11	GACCCCGACA	10	2981.97	33.6	106.2	70	9.4	28.1
32	GL Decamer AV-12	AGCCGTCGAA	10	3037	29.5	111.6	60	9	27.2
33	GL Decamer AV-13	CTGACTTCCC	10	2938.96	29.5	90	60	11.1	32.7
34	GL Decamer AV-14	CTCCGGATCA	10	2987.98	29.5	100.8	60	9.9	29.6
35	GL Decamer AV-15	GGCAGCGAGGT	10	3093.03	33.6	111.8	70	8.9	27.7
36	GL Decamer AV-16	GACAAGGACC	10	3046	29.5	118.3	60	8.5	25.7
37	GL Decamer AV-17	CTCGAACCCC	10	2932.95	33.6	95.4	70	10.5	30.7
38	GL Decamer AV-18	TTGCTCACGG	10	3019	29.5	98.2	60	10.2	30.7
39	GL Decamer AV-19	CTCGATCACC	10	2947.96	29.5	96.7	60	10.3	30.5
40	GL Decamer AV-20	TCATGCGCAC	10	2987.98	29.5	100.8	60	9.9	29.6



Product Specification: Primer Data Sheet

GL RAPD Decamer 25 AWAX Set

Catalog No. 40-0001-25

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer AW-01	ACCTAGGGGA	10	3077.02	29.5	115.7	60	8.6	26.6
2	GL Decamer AW-02	TCGCAGGTTTC	10	3019	29.5	98.2	60	10.2	30.7
3	GL Decamer AW-03	CCATGCGGAG	10	3053.01	33.6	107.7	70	9.3	28.3
4	GL Decamer AW-04	AGGAGCGACA	10	3086.02	29.5	122.4	60	8.2	25.2
5	GL Decamer AW-05	CTGCTTCGAG	10	3019	29.5	98.2	60	10.2	30.7
6	GL Decamer AW-06	TTTGGGCCCC	10	2994.99	33.6	90.2	70	11.1	33.2
7	GL Decamer AW-07	AGCCCCAAAG	10	2981.97	33.6	106.2	70	9.4	28.1
8	GL Decamer AW-08	CTGTCTGTGG	10	3050.02	29.5	95.6	60	10.5	31.9
9	GL Decamer AW-09	ACTGGGTCGG	10	3084.03	33.6	105.1	70	9.5	29.3
10	GL Decamer AW-10	GGTGTTTGCC	10	3050.02	29.5	95.6	60	10.5	31.9
11	GL Decamer AW-11	CTGCCACGAG	10	3012.99	33.6	103.6	70	9.7	29.1
12	GL Decamer AW-12	GAGCAAGGCA	10	3086.02	29.5	122.4	60	8.2	25.2
13	GL Decamer AW-13	CTACGATGCC	10	2987.98	29.5	100.8	60	9.9	29.6
14	GL Decamer AW-14	GGTTCTGCTC	10	3010	29.5	91.5	60	10.9	32.9
15	GL Decamer AW-15	CCAGTCCCAA	10	2956.96	29.5	103.4	60	9.7	28.6
16	GL Decamer AW-16	TTACCCCGCT	10	2938.96	29.5	90	60	11.1	32.7
17	GL Decamer AW-17	TGCTGCTGCC	10	2994.99	33.6	90.2	70	11.1	33.2
18	GL Decamer AW-18	GGCGCAACTG	10	3053.01	33.6	107.7	70	9.3	28.3
19	GL Decamer AW-19	GGACACAGAG	10	3086.02	29.5	122.4	60	8.2	25.2
20	GL Decamer AW-20	TGTCCTAGCC	10	2978.98	29.5	94.1	60	10.6	31.7
21	GL Decamer AX-01	GTGTGCCGTT	10	3050.02	29.5	95.6	60	10.5	31.9
22	GL Decamer AX-02	GGGAGGCAAA	10	3126.04	29.5	126.5	60	7.9	24.7
23	GL Decamer AX-03	CCAAGAGGCT	10	3037	29.5	111.6	60	9	27.2
24	GL Decamer AX-04	TCCCCAGGAG	10	3012.99	33.6	103.6	70	9.7	29.1
25	GL Decamer AX-05	AGTGCACACC	10	2996.98	29.5	107.5	60	9.3	27.9
26	GL Decamer AX-06	AGGCATCGTG	10	3068.02	29.5	109	60	9.2	28.1
27	GL Decamer AX-07	ACCGCACAGA	10	3046	29.5	118.3	60	8.5	25.7
28	GL Decamer AX-08	AGTATGGCGG	10	3108.04	29.5	113.1	60	8.8	27.5
29	GL Decamer AX-09	GGAAGTCCTG	10	3068.02	29.5	109	60	9.2	28.1
30	GL Decamer AX-10	CCAGGCTGAC	10	3012.99	33.6	103.6	70	9.7	29.1
31	GL Decamer AX-11	TGATTGCGGG	10	3099.04	29.5	106.4	60	9.4	29.1
32	GL Decamer AX-12	GGTCGGGTCA	10	3084.03	33.6	105.1	70	9.5	29.3
33	GL Decamer AX-13	GAGCACTGCT	10	3028	29.5	104.9	60	9.5	28.9
34	GL Decamer AX-14	CACGGGCTTG	10	3044.01	33.6	101	70	9.9	30.1
35	GL Decamer AX-15	CAGCAATCCC	10	2956.96	29.5	103.4	60	9.7	28.6
36	GL Decamer AX-16	GTCTGTGCGG	10	3075.03	33.6	98.4	70	10.2	31.3
37	GL Decamer AX-17	TGGGCTCTGG	10	3075.03	33.6	98.4	70	10.2	31.3
38	GL Decamer AX-18	GTGTGCACTG	10	3099.04	29.5	106.4	60	9.4	29.1
39	GL Decamer AX-19	CCCTGTGCGA	10	2963.97	33.6	92.8	70	10.8	31.9
40	GL Decamer AX-20	ACACTCGGCA	10	2996.98	29.5	107.5	60	9.3	27.9



Product Specification: Primer Data Sheet

GL RAPD Decamer 26 AYAZ Set

Catalog No. 40-0001-26

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer AY-01	GTCCACCTCT	10	2938.96	29.5	90	60	11.1	32.7
2	GL Decamer AY-02	TGCGAAGGCT	10	3068.02	29.5	109	60	9.2	28.1
3	GL Decamer AY-03	TTTCCGGGAG	10	3059.02	29.5	102.3	60	9.8	29.9
4	GL Decamer AY-04	AAGGCTCGAC	10	3037	29.5	111.6	60	9	27.2
5	GL Decamer AY-05	TCGCTGCGTT	10	3010	29.5	91.5	60	10.9	32.9
6	GL Decamer AY-06	GGCTTCGCAA	10	3028	29.5	104.9	60	9.5	28.9
7	GL Decamer AY-07	GACCGTCTGT	10	3019	29.5	98.2	60	10.2	30.7
8	GL Decamer AY-08	AGGCTTCCCT	10	2978.98	29.5	94.1	60	10.6	31.7
9	GL Decamer AY-09	CCGATCCAAC	10	2956.96	29.5	103.4	60	9.7	28.6
10	GL Decamer AY-10	CAAGGCCCT	10	2972.97	33.6	99.5	70	10.1	29.9
11	GL Decamer AY-11	ACGCGCCTTC	10	2963.97	33.6	92.8	70	10.8	31.9
12	GL Decamer AY-12	CTGTCGGCGT	10	3035.01	33.6	94.3	70	10.6	32.2
13	GL Decamer AY-13	CCGCTCGTAA	10	2987.98	29.5	100.8	60	9.9	29.6
14	GL Decamer AY-14	GGTGGGTAGA	10	3148.06	29.5	117.2	60	8.5	26.9
15	GL Decamer AY-15	CCAAGAGGCA	10	3046	29.5	118.3	60	8.5	25.7
16	GL Decamer AY-16	GGTGTGGTTC	10	3090.04	29.5	99.7	60	10	31
17	GL Decamer AY-17	GGTGATTCGG	10	3099.04	29.5	106.4	60	9.4	29.1
18	GL Decamer AY-18	ACCCCAACCA	10	2925.94	29.5	106	60	9.4	27.6
19	GL Decamer AY-19	AACTGGCCC	10	2987.98	29.5	100.8	60	9.9	29.6
20	GL Decamer AY-20	TCATTCGCC	10	2938.96	29.5	90	60	11.1	32.7
21	GL Decamer AZ-01	TCGGATCCGT	10	3019	29.5	98.2	60	10.2	30.7
22	GL Decamer AZ-02	CCTGAACGGA	10	3037	29.5	111.6	60	9	27.2
23	GL Decamer AZ-03	GGCTGTGTGG	10	3115.05	33.6	102.5	70	9.8	30.4
24	GL Decamer AZ-04	CCAGCCTCAG	10	2972.97	33.6	99.5	70	10.1	29.9
25	GL Decamer AZ-05	TCCGCATACC	10	2947.96	29.5	96.7	60	10.3	30.5
26	GL Decamer AZ-06	CCTTCGGAGG	10	3044.01	33.6	101	70	9.9	30.1
27	GL Decamer AZ-07	CACGAGTCTC	10	2987.98	29.5	100.8	60	9.9	29.6
28	GL Decamer AZ-08	TCGCTCGTAG	10	3019	29.5	98.2	60	10.2	30.7
29	GL Decamer AZ-09	CCTTGACCCC	10	2923.95	33.6	88.7	70	11.3	33
30	GL Decamer AZ-10	ACTCTGGGGA	10	3068.02	29.5	109	60	9.2	28.1
31	GL Decamer AZ-11	TCCAGCGCGT	10	3003.99	33.6	96.9	70	10.3	31
32	GL Decamer AZ-12	GATGGGCCTG	10	3084.03	33.6	105.1	70	9.5	29.3
33	GL Decamer AZ-13	CCCGAAGCAA	10	3005.98	29.5	114.2	60	8.8	26.3
34	GL Decamer AZ-14	CACGGCTTCC	10	2963.97	33.6	92.8	70	10.8	31.9
35	GL Decamer AZ-15	TCCGCTAGTC	10	2978.98	29.5	94.1	60	10.6	31.7
36	GL Decamer AZ-16	AGGCGAACTG	10	3077.02	29.5	115.7	60	8.6	26.6
37	GL Decamer AZ-17	CACGCAGATG	10	3037	29.5	111.6	60	9	27.2
38	GL Decamer AZ-18	CCGACGTTGA	10	3028	29.5	104.9	60	9.5	28.9
39	GL Decamer AZ-19	ACACTCTCGG	10	2987.98	29.5	100.8	60	9.9	29.6
40	GL Decamer AZ-20	CATCACCCCT	10	2907.94	29.5	92.6	60	10.8	31.4



Product Specification: Primer Data Sheet

GL RAPD Decamer 27 BABB Set

Catalog No. 40-0001-27

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer BA-01	TTCCCCACCC	10	2883.93	33.6	84.6	70	11.8	34.1
2	GL Decamer BA-02	TGCTCGGCTC	10	2994.99	33.6	90.2	70	11.1	33.2
3	GL Decamer BA-03	GTGCGAGAAC	10	3077.02	29.5	115.7	60	8.6	26.6
4	GL Decamer BA-04	TCCTAGGCTC	10	2978.98	29.5	94.1	60	10.6	31.7
5	GL Decamer BA-05	TGCGTTCAC	10	2978.98	29.5	94.1	60	10.6	31.7
6	GL Decamer BA-06	GGACGACCGT	10	3053.01	33.6	107.7	70	9.3	28.3
7	GL Decamer BA-07	GGGTCGCATC	10	3044.01	33.6	101	70	9.9	30.1
8	GL Decamer BA-08	CCACAGCCGA	10	2981.97	33.6	106.2	70	9.4	28.1
9	GL Decamer BA-09	GGAACCTCAC	10	2996.98	29.5	107.5	60	9.3	27.9
10	GL Decamer BA-10	GGACGTTGAG	10	3108.04	29.5	113.1	60	8.8	27.5
11	GL Decamer BA-11	CCACCTTCAG	10	2947.96	29.5	96.7	60	10.3	30.5
12	GL Decamer BA-12	TGTTGGGCAC	10	3059.02	29.5	102.3	60	9.8	29.9
13	GL Decamer BA-13	AGGGCGAATG	10	3117.04	29.5	119.8	60	8.3	26
14	GL Decamer BA-14	TCGGGAGTGG	10	3124.05	33.6	109.2	70	9.2	28.6
15	GL Decamer BA-15	GAAGACCTGG	10	3077.02	29.5	115.7	60	8.6	26.6
16	GL Decamer BA-16	CCACGCATCA	10	2956.96	29.5	103.4	60	9.7	28.6
17	GL Decamer BA-17	TGTACCCCTG	10	2978.98	29.5	94.1	60	10.6	31.7
18	GL Decamer BA-18	CTCGGATGTC	10	3019	29.5	98.2	60	10.2	30.7
19	GL Decamer BA-19	CCATCCGTTG	10	2978.98	29.5	94.1	60	10.6	31.7
20	GL Decamer BA-20	GAGCGCTACC	10	3012.99	33.6	103.6	70	9.7	29.1
21	GL Decamer BB-01	ACACTGGCTG	10	3028	29.5	104.9	60	9.5	28.9
22	GL Decamer BB-02	CCCCCGTTAG	10	2963.97	33.6	92.8	70	10.8	31.9
23	GL Decamer BB-03	TCACGTGGCT	10	3019	29.5	98.2	60	10.2	30.7
24	GL Decamer BB-04	ACCAGGTAC	10	2996.98	29.5	107.5	60	9.3	27.9
25	GL Decamer BB-05	GGGCCGAACA	10	3062.01	33.6	114.4	70	8.7	26.8
26	GL Decamer BB-06	CTGAAGCTGG	10	3068.02	29.5	109	60	9.2	28.1
27	GL Decamer BB-07	GAAGGCTGGG	10	3133.05	33.6	115.9	70	8.6	27
28	GL Decamer BB-08	TCGTCGAAGG	10	3068.02	29.5	109	60	9.2	28.1
29	GL Decamer BB-09	AGGCCGGTCA	10	3053.01	33.6	107.7	70	9.3	28.3
30	GL Decamer BB-10	ACTTGCCTGG	10	3019	29.5	98.2	60	10.2	30.7
31	GL Decamer BB-11	TGCGGGTTCC	10	3035.01	33.6	94.3	70	10.6	32.2
32	GL Decamer BB-12	TTCGGCCGAC	10	3003.99	33.6	96.9	70	10.3	31
33	GL Decamer BB-13	CTTCGGTGTG	10	3050.02	29.5	95.6	60	10.5	31.9
34	GL Decamer BB-14	GTGGGACCTG	10	3084.03	33.6	105.1	70	9.5	29.3
35	GL Decamer BB-15	AAGTCCCCTG	10	3028	29.5	104.9	60	9.5	28.9
36	GL Decamer BB-16	TCGGCACCGT	10	3003.99	33.6	96.9	70	10.3	31
37	GL Decamer BB-17	ACACCGTGCC	10	2972.97	33.6	99.5	70	10.1	29.9
38	GL Decamer BB-18	CAACCGGTCT	10	2987.98	29.5	100.8	60	9.9	29.6
39	GL Decamer BB-19	TTGCGGACAG	10	3068.02	29.5	109	60	9.2	28.1
40	GL Decamer BB-20	CCAGGTGTAG	10	3068.02	29.5	109	60	9.2	28.1



Product Specification: Primer Data Sheet

GL RAPD Decamer 28 BCBD Set

Catalog No. 40-0001-28

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer BC-01	CCTTCGGCTC	10	2954.97	33.6	86.1	70	11.6	34.3
2	GL Decamer BC-02	ACAGTAGCGG	10	3077.02	29.5	115.7	60	8.6	26.6
3	GL Decamer BC-03	GGCTTGACCT	10	3019	29.5	98.2	60	10.2	30.7
4	GL Decamer BC-04	CCACGTGCCA	10	2972.97	33.6	99.5	70	10.1	29.9
5	GL Decamer BC-05	GAGGCGATTG	10	3108.04	29.5	113.1	60	8.8	27.5
6	GL Decamer BC-06	GAAGGGCGAGA	10	3126.04	29.5	126.5	60	7.9	24.7
7	GL Decamer BC-07	TGTGCCTGAC	10	3019	29.5	98.2	60	10.2	30.7
8	GL Decamer BC-08	GGTCTTCCCT	10	2969.98	29.5	87.4	60	11.4	34
9	GL Decamer BC-09	GTCATGCGAC	10	3028	29.5	104.9	60	9.5	28.9
10	GL Decamer BC-10	AACGTCGAGG	10	3077.02	29.5	115.7	60	8.6	26.6
11	GL Decamer BC-11	TTTTGCCCCC	10	2929.96	29.5	83.3	60	12	35.2
12	GL Decamer BC-12	CCTCCACCAG	10	2932.95	33.6	95.4	70	10.5	30.7
13	GL Decamer BC-13	CCTGGCACAG	10	3012.99	33.6	103.6	70	9.7	29.1
14	GL Decamer BC-14	GGTCCGACGA	10	3053.01	33.6	107.7	70	9.3	28.3
15	GL Decamer BC-15	CCAGACTCCA	10	2956.96	29.5	103.4	60	9.7	28.6
16	GL Decamer BC-16	CTGGTGCTCA	10	3019	29.5	98.2	60	10.2	30.7
17	GL Decamer BC-17	CCGTTAGTCC	10	2978.98	29.5	94.1	60	10.6	31.7
18	GL Decamer BC-18	GTGAAGGAGG	10	3157.06	29.5	123.9	60	8.1	25.5
19	GL Decamer BC-19	ACAAGCGCGA	10	3046	29.5	118.3	60	8.5	25.7
20	GL Decamer BC-20	AGCACTGGGG	10	3093.03	33.6	111.8	70	8.9	27.7
21	GL Decamer BD-01	TCACTCGCTC	10	2938.96	29.5	90	60	11.1	32.7
22	GL Decamer BD-02	CCTCCCCAAG	10	2932.95	33.6	95.4	70	10.5	30.7
23	GL Decamer BD-03	GAGCCCCGAA	10	3021.99	33.6	110.3	70	9.1	27.4
24	GL Decamer BD-04	TCGGGTGTTG	10	3090.04	29.5	99.7	60	10	31
25	GL Decamer BD-05	GTGCGGAGAG	10	3133.05	33.6	115.9	70	8.6	27
26	GL Decamer BD-06	AAGCTGGCGT	10	3068.02	29.5	109	60	9.2	28.1
27	GL Decamer BD-07	GAGCTGGTCC	10	3044.01	33.6	101	70	9.9	30.1
28	GL Decamer BD-08	CATACGGGCT	10	3028	29.5	104.9	60	9.5	28.9
29	GL Decamer BD-09	CCACGGTCAG	10	3012.99	33.6	103.6	70	9.7	29.1
30	GL Decamer BD-10	GACGCTATGG	10	3068.02	29.5	109	60	9.2	28.1
31	GL Decamer BD-11	CAACCGAGTC	10	2996.98	29.5	107.5	60	9.3	27.9
32	GL Decamer BD-12	GGGAACCGTC	10	3053.01	33.6	107.7	70	9.3	28.3
33	GL Decamer BD-13	CCTGGAACGG	10	3053.01	33.6	107.7	70	9.3	28.3
34	GL Decamer BD-14	TCCCTGTGAG	10	3019	29.5	98.2	60	10.2	30.7
35	GL Decamer BD-15	TGTCGTGGTC	10	3050.02	29.5	95.6	60	10.5	31.9
36	GL Decamer BD-16	GAACTCCCAG	10	2996.98	29.5	107.5	60	9.3	27.9
37	GL Decamer BD-17	GTTCGCTCCC	10	2954.97	33.6	86.1	70	11.6	34.3
38	GL Decamer BD-18	ACGCACACTC	10	2956.96	29.5	103.4	60	9.7	28.6
39	GL Decamer BD-19	GGTT CCTCTC	10	2969.98	29.5	87.4	60	11.4	34
40	GL Decamer BD-20	AGGCGGCACA	10	3062.01	33.6	114.4	70	8.7	26.8



Product Specification: Primer Data Sheet

GL RAPD Decamer 29 BEBF Set

Catalog No. 40-0001-29

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer BE-01	CACTCCTGGT	10	2978.98	29.5	94.1	60	10.6	31.7
2	GL Decamer BE-02	ACGCCTGTAG	10	3028	29.5	104.9	60	9.5	28.9
3	GL Decamer BE-03	TGGACTCGGT	10	3059.02	29.5	102.3	60	9.8	29.9
4	GL Decamer BE-04	CCCAAGCGAA	10	3005.98	29.5	114.2	60	8.8	26.3
5	GL Decamer BE-05	GGAACGCTAC	10	3037	29.5	111.6	60	9	27.2
6	GL Decamer BE-06	CAGCGGGTCA	10	3053.01	33.6	107.7	70	9.3	28.3
7	GL Decamer BE-07	CCGTCCATG	10	2978.98	29.5	94.1	60	10.6	31.7
8	GL Decamer BE-08	GGGAAGCGTC	10	3093.03	33.6	111.8	70	8.9	27.7
9	GL Decamer BE-09	CCCGCTTCC	10	2914.95	33.6	82	70	12.2	35.5
10	GL Decamer BE-10	AAGCGGCCCT	10	3012.99	33.6	103.6	70	9.7	29.1
11	GL Decamer BE-11	GTCCTGCTGT	10	3010	29.5	91.5	60	10.9	32.9
12	GL Decamer BE-12	GGTTGTTCCC	10	3010	29.5	91.5	60	10.9	32.9
13	GL Decamer BE-13	TCGGTGAGTC	10	3059.02	29.5	102.3	60	9.8	29.9
14	GL Decamer BE-14	CTTTGCGCAC	10	2978.98	29.5	94.1	60	10.6	31.7
15	GL Decamer BE-15	TTCGGCGATG	10	3059.02	29.5	102.3	60	9.8	29.9
16	GL Decamer BE-16	CTCCACGACT	10	2947.96	29.5	96.7	60	10.3	30.5
17	GL Decamer BE-17	GGGAAAAGCC	10	3086.02	29.5	122.4	60	8.2	25.2
18	GL Decamer BE-18	CCAAGCCGTC	10	2972.97	33.6	99.5	70	10.1	29.9
19	GL Decamer BE-19	AGGCCAACAG	10	3046	29.5	118.3	60	8.5	25.7
20	GL Decamer BE-20	CAAAGGCGTG	10	3077.02	29.5	115.7	60	8.6	26.6
21	GL Decamer BF-01	GGAGCTGACT	10	3068.02	29.5	109	60	9.2	28.1
22	GL Decamer BF-02	GACACACTCC	10	2956.96	29.5	103.4	60	9.7	28.6
23	GL Decamer BF-03	TCCCTTGACC	10	2938.96	29.5	90	60	11.1	32.7
24	GL Decamer BF-04	GACAGGTTGG	10	3108.04	29.5	113.1	60	8.8	27.5
25	GL Decamer BF-05	CACCCCGAAA	10	2965.96	29.5	110.1	60	9.1	26.9
26	GL Decamer BF-06	TCCACGGGCA	10	3012.99	33.6	103.6	70	9.7	29.1
27	GL Decamer BF-07	CACCATCGTG	10	2987.98	29.5	100.8	60	9.9	29.6
28	GL Decamer BF-08	CCTGGGTCCA	10	3003.99	33.6	96.9	70	10.3	31
29	GL Decamer BF-09	ACCCAGGTTG	10	3028	29.5	104.9	60	9.5	28.9
30	GL Decamer BF-10	GTGACCAGAG	10	3077.02	29.5	115.7	60	8.6	26.6
31	GL Decamer BF-11	GACGACCGCA	10	3021.99	33.6	110.3	70	9.1	27.4
32	GL Decamer BF-12	CTTCGCTGTC	10	2969.98	29.5	87.4	60	11.4	34
33	GL Decamer BF-13	CCGCCGGTAA	10	3012.99	33.6	103.6	70	9.7	29.1
34	GL Decamer BF-14	CCGCGTTGAG	10	3044.01	33.6	101	70	9.9	30.1
35	GL Decamer BF-15	ACGCGAACCT	10	2996.98	29.5	107.5	60	9.3	27.9
36	GL Decamer BF-16	AGGGTCCGTG	10	3084.03	33.6	105.1	70	9.5	29.3
37	GL Decamer BF-17	CAAGCTCGTG	10	3028	29.5	104.9	60	9.5	28.9
38	GL Decamer BF-18	AGCCAAGGAC	10	3046	29.5	118.3	60	8.5	25.7
39	GL Decamer BF-19	TTCCCGCACT	10	2938.96	29.5	90	60	11.1	32.7
40	GL Decamer BF-20	ACCCTGAGGA	10	3037	29.5	111.6	60	9	27.2



Product Specification: Primer Data Sheet

GL RAPD Decamer 30 BGBH Set

Catalog No. 40-0001-30

Material Supplied: ~10 nmol of lyophilized primer. See tube label for exact nmol, µg and A₂₆₀ units

Count	Oligo Name	Sequence(5'-3')	Size	MW	TM	EC	%GC	nmol/A260	ug/A260
1	GL Decamer BG-01	GTGGCTCTCC	10	2994.99	33.6	90.2	70	11.1	33.2
2	GL Decamer BG-02	GGAAAGCCCCA	10	3046	29.5	118.3	60	8.5	25.7
3	GL Decamer BG-03	GTGCCACTTC	10	2978.98	29.5	94.1	60	10.6	31.7
4	GL Decamer BG-04	GTTCCCGACA	10	2987.98	29.5	100.8	60	9.9	29.6
5	GL Decamer BG-05	CAAGCCGTGA	10	3037	29.5	111.6	60	9	27.2
6	GL Decamer BG-06	GTGGATCGTC	10	3059.02	29.5	102.3	60	9.8	29.9
7	GL Decamer BG-07	CAGAGGTTCC	10	3028	29.5	104.9	60	9.5	28.9
8	GL Decamer BG-08	GACCAGAGGT	10	3077.02	29.5	115.7	60	8.6	26.6
9	GL Decamer BG-09	GGCTCTGGGT	10	3075.03	33.6	98.4	70	10.2	31.3
10	GL Decamer BG-10	GGGATAAGGG	10	3157.06	29.5	123.9	60	8.1	25.5
11	GL Decamer BG-11	ACGGCAATGG	10	3077.02	29.5	115.7	60	8.6	26.6
12	GL Decamer BG-12	CCCGAGAAAC	10	3005.98	29.5	114.2	60	8.8	26.3
13	GL Decamer BG-13	GGTTGGGCCA	10	3084.03	33.6	105.1	70	9.5	29.3
14	GL Decamer BG-14	GACCAGCCCA	10	2981.97	33.6	106.2	70	9.4	28.1
15	GL Decamer BG-15	ACGGGAGAGA	10	3126.04	29.5	126.5	60	7.9	24.7
16	GL Decamer BG-16	TGCTTGGGTG	10	3090.04	29.5	99.7	60	10	31
17	GL Decamer BG-17	TCCGGGACTC	10	3003.99	33.6	96.9	70	10.3	31
18	GL Decamer BG-18	TGGCGCTGGT	10	3075.03	33.6	98.4	70	10.2	31.3
19	GL Decamer BG-19	GGCTCTCGCTC	10	2994.99	33.6	90.2	70	11.1	33.2
20	GL Decamer BG-20	TGGTACCTGG	10	3059.02	29.5	102.3	60	9.8	29.9
21	GL Decamer BH-01	CCGACTCTGG	10	3003.99	33.6	96.9	70	10.3	31
22	GL Decamer BH-02	GTAAGCCGAG	10	3077.02	29.5	115.7	60	8.6	26.6
23	GL Decamer BH-03	GGAGCAGCAA	10	3086.02	29.5	122.4	60	8.2	25.2
24	GL Decamer BH-04	ACCTGCCAAC	10	2956.96	29.5	103.4	60	9.7	28.6
25	GL Decamer BH-05	GTAGGTCGCA	10	3068.02	29.5	109	60	9.2	28.1
26	GL Decamer BH-06	TCGTGGCAC	10	3028	29.5	104.9	60	9.5	28.9
27	GL Decamer BH-07	TGTACGGCAC	10	3028	29.5	104.9	60	9.5	28.9
28	GL Decamer BH-08	ACGGAGGCAG	10	3102.03	33.6	118.5	70	8.4	26.2
29	GL Decamer BH-09	GTCTTCCGTC	10	2969.98	29.5	87.4	60	11.4	34
30	GL Decamer BH-10	GTGTGCCTGG	10	3075.03	33.6	98.4	70	10.2	31.3
31	GL Decamer BH-11	AGCCCAAAGG	10	3046	29.5	118.3	60	8.5	25.7
32	GL Decamer BH-12	TCGCCTTGTC	10	2969.98	29.5	87.4	60	11.4	34
33	GL Decamer BH-13	AGTTGGGCAG	10	3108.04	29.5	113.1	60	8.8	27.5
34	GL Decamer BH-14	ACCGTGGGTG	10	3084.03	33.6	105.1	70	9.5	29.3
35	GL Decamer BH-15	GAGAACGCTG	10	3077.02	29.5	115.7	60	8.6	26.6
36	GL Decamer BH-16	CTGCGGGTTC	10	3035.01	33.6	94.3	70	10.6	32.2
37	GL Decamer BH-17	CTCTTACGGG	10	3019	29.5	98.2	60	10.2	30.7
38	GL Decamer BH-18	GACGCTTGTC	10	3019	29.5	98.2	60	10.2	30.7
39	GL Decamer BH-19	GTCGTGCGGA	10	3084.03	33.6	105.1	70	9.5	29.3
40	GL Decamer BH-20	CACCGACATC	10	2956.96	29.5	103.4	60	9.7	28.6