Product Specifications & Manual

Oligo dT primers, random primers, sequencing primers
Custom Oligo Synthesis, antisense oligos, RNA oligos, chimeric oligos,
Affinity Ligands, 2'-5' linked Oligos

Oligo dT Biotin & Digoxigenin Labeled Primers

Affinity Ligand Labeled Oligo d(T) Primers

Storage Condition: See Material Supplied List

For Research Use Only. Not for use in diagnostic procedures for clinical purposes

Material Supplied

Quantity	25 µg
Shipping Condition	Ambient
Storage	-20°C

Item	Catalog No.	Product Description	MW*	~nmols/25µg
❑	26-5020-02	5' Biotin-Oligo d(T)20	6,460	3.84
❑	26-5031-02	5' Biotin-Oligo d(T)23 VN	7,992.1	3.12

*Molecular weight includes the mw of biotin

Item	Catalog No.	Product Description	MW*	~nmol/25µg
❑	26-4500-02	5'-Dig-Oligo d(T)12-18	5,280	5.2
❑	26-4512-02	5'-Dig-Oligo d(T)12	4,367.4	7
❑	26-4513-02	5'-Dig-Oligo d(T)13	4,671.6	6.5
❑	26-4514-02	5'-Dig-Oligo d(T)14	4,975.8	6
❑	26-4515-02	5'-Dig-Oligo d(T)15	5,280	5.5
❑	26-4516-02	5'-Dig-Oligo d(T)16	5,584.2	5.2
❑	26-4517-02	5'-Dig-Oligo d(T)17	5,888.4	5
❑	26-4518-02	5'-Dig-Oligo d(T)18	6,192.6	4.7
❑	26-4519-02	5'-Dig-Oligo d(T)19	6,496.8	4.4
❑	26-4520-02	5'-Dig-Oligo d(T)20	6,801	4.1
❑	26-4521-02	5'-Dig-Oligo d(T)21	7,105.2	3.8

*Molecular weight includes the mw of digoxigenin. An average weight is reported for Oligo d(T)12-18.

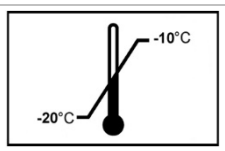
Certificate of Analysis & Product Specifications

All biotin & digoxigenin are manufactured at Gene Link and then purified. These are qualified to be used for random priming labelling reactions and for streptavidin based detection using horseradish peroxidase (HRP) or alkaline phosphatase (AP) using chromogenic or chemiluminescent substrates.

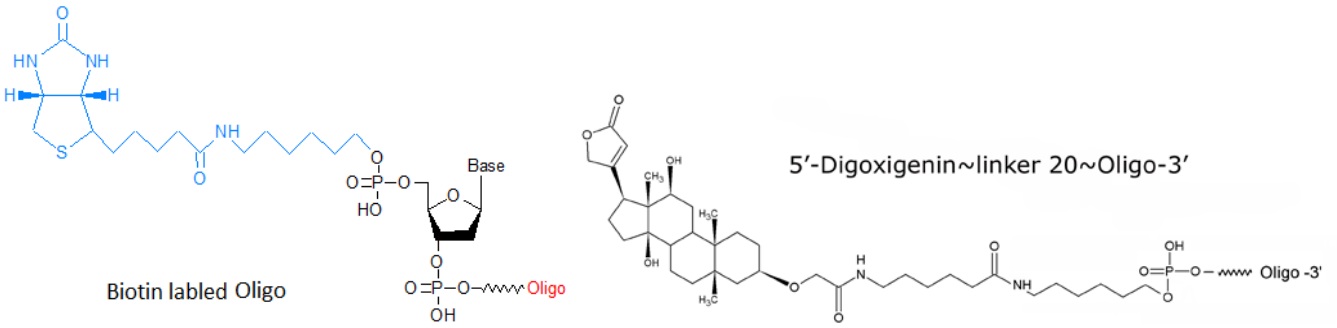
This product is certified to prime first strand cDNA synthesis reaction using poly $(A)^+$ RNA as a template. Appropriate nuclease free handling, dispensing and storage conditions required.

Manufacturing lot numbers are stated on the label of each product and accompanying packing slip.

Product Label Information

		
Research Use Only	**Storage** Store at -20°C to -10°C	**Lot Number** Stated on product tube and packing slip
		
Expiry One year from Date of Shipment	**Instructions** Consult product manual	**QR Code** Visit Gene Link website for product details

Description



The biotin and digoxigenin labeled Oligo d(T) primers of varying sizes are individually synthesized and purified. Labeled Oligo d(T)12-18 are mixed in equimolar ratio. Oligo dT is used primarily to prime synthesis by reverse transcriptase of the first strand cDNA using mRNA as a template for use in microarray hybridization protocol.

The biotin or digoxigenin oligo dT is gel purified and supplied as a lyophilized powder, after reconstitution store at -20°C. Oligo purity is greater than 98% as determined by denaturing polyacrylamide gel electrophoresis.

Reconstitution

Recommended reconstitution is at a concentration of 50 µM (50 pmol/ µL) in RNase-free DEPC treated water or 10mM Tris pH 8.0. The stock solution can be further diluted to an appropriate working concentration as required.

To prepare a 50 µM solution of primer, use the "nmol/25 µg" value of the lyophilized oligo and multiply by 20 to determine the volume of diluent in microliters to add.

Formula:
"Total nmol" x 20 = µL of diluent to add.

Example: Total nmol = 5.5
7.5 x 20= 110
Add 110 µL of RNase-free water or TE.

- Spin the tube briefly to bring down the contents of the tube that may have lodged in the cap during shipment. Pellet may be very small and not visible.
- Add appropriate amount of RNAse free water or 10mM Tris pH 8.0 directly to the tube. Vortex briefly.
- The above solution is 50µM. This is equivalent to 50 pmol/µL.

Store at -20°C or below after reconstitution.

Recommended Usage

Use 2 µL of the 50 µM solution for 1 µg poly $(A)^+$ RNA as a template in a 20 µL reaction volume.
See reaction conditions for more details.

Functional Assay Conditions

The conditions given below have been tested to yield first strand cDNA synthesis and is given as an example. Variations and other protocols have been used by other laboratories using this product to yield excellent first strand synthesis. Investigators can substitute their own reaction conditions.

The quality of RNA is very important for the reverse transcription reaction. It is essential to have intact full length RNA as the template material that is free of even trace amounts of RNases and contaminating chemicals. Poor quality RNA template is usually the cause of truncated and incomplete cDNA products.

Add components in the order given below. Reaction volume can be scaled up.

Component	Volume	Comments
poly$(A)^+$ RNA in sterile water Quantity ~1.0 µg	up to 10 µL	Use RNAse free reagents and disposables.
RNase-free water	variable	Calculate total volume and add appropriate volume of RNase-free water at this stage.
50 µM oligo(dT) primer solution (50 pmol/µL = ~0.5 µg/µL)	2 µL	Final concentration is 5 µM (5 pmol/ µL).
*50 µM Random Primer solution	4 µL	Final concentration is 10 µM (10 pmol/ µL).
Heat mixture to 70°C for 10 min, and quick chill on ice. *Add random primers if required.		
5X first strand buffer [250 mM Tris-HCl (pH 8.3), 375 mM KCl, 15 mM MgCl2]	4 µL	
0.1 M DTT	2 µL	
dNTPs (5 mM each dNTP)	2 µL	Final concentration is 0.5 mM of each dNTP.
[α-^{32}P]dCTP (1 µCi/µL)	1 µL	Tracer optional. Add only if required.
Reverse transcriptase; 200 units	1- 2 µL	
Total Volume	**20 µL**	
Incubate at 37°C for 1 hour.		

Related Products

Gene Link stocks various oligo dT primers, oligo dT VN primer, Oligo dT T7 primer, random primers, including an array of fluorescent dye labeled primers for genetic analysis using florescent detecting instruments. The C-12 amino labeled primers are ready to be conjugated to the investigators choice of NHS-activated ligand.

Random Primers are a mixture of oligonucleotides representing all possible sequence for that size. Random Primers can be used to prime synthesis in oligo-labeling similar to using hexamers (1,2) and cDNA synthesis. Random prime labeling yields high specific activity labeled DNA probe which can be used for all southern, northern and in situ hybridization studies. Random Primers can be also used similar to using hexamers in cDNA synthesis in combination with oligo dT to yield more 5' end cDNA sequence.

Related Product Ordering Information

Oligo dT unlabeled primers

Catalog No.	Product Description	Quantity
26-4000-04	Oligo d(T) 12	100 µg
26-4000-01	Oligo d(T)16	100 µg
26-4000-02	Oligo d(T)18	100 µg
26-4000-05	Oligo d(T)12-18	100 µg
26-4002-10	Oligo d(T)23	50 µg
26-4002-11	Oligo d(T)23 VN	50 µg
26-4002-16	Oligo d(T)36	50 µg
26-3000-23	T7 Oligo d(T)23	25 µg
26-3000-24	T7 Oligo d(T) 23 VN	25 µg
26-3000-25	T7 Short Oligo d(T)23	25 µg
26-3000-26	T7 Short Oligo d(T) 23 VN	25 µg
26-3000-27	T7 Long Oligo d(T)23	25 µg
26-3000-28	T7 Long Oligo d(T) 23 VN	25 µg

Related Product Ordering Information

Random Primers

Catalog No.	Product Description	Quantity
26-4000-03	Random Hexamers	100ug
26-4000-06	Random Nonamers	100ug
26-4000-11	Random Heptamer	100ug
26-4000-12	Random Octamer	100ug
26-4001-13	Random Hexamer 72%GC	100ug
26-4001-16	Random Nonamers 72%GC	100ug
26-4001-17	Random 36mer 72%GC	100ug
26-4001-18	Random 60mer 72%GC	100ug

Visit www.genelink.com for a complete list of fluorescent dye labeled oligo dT primers

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