



# Fluorescent Molecular Primers & Probes

## UNIQUE CAPABILITIES

Gene Link's proprietary synthesis and processing methods for fluorescent dyes yield primers and probes of superior quality. Gene Link offers synthesis of various forms of molecular primers and probes.

We provide technical service in the design of novel probes and synthesize numerous combinations of dyes, quenchers, RNA, phosphorothioate, 2'-O-methyl and chimeric probes.

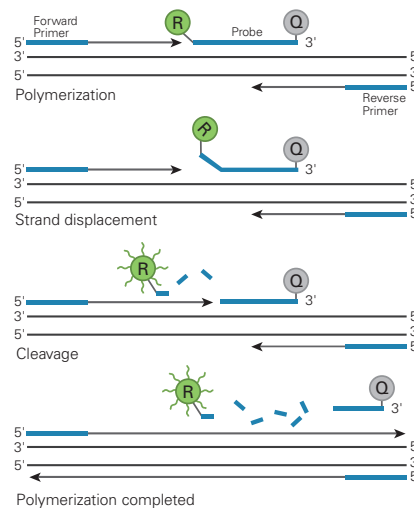
All fluorescent dye-labeled oligos are monitored for coupling efficiency. Many dye conjugations are available. Fluorescent primers are shipped in amber tubes to protect photo-sensitive primers.

### Fluorescent Primers

Fluorescent primers are extensively used for genotyping, SNP genotyping, allelic discrimination and fragment analysis. Gene Link synthesizes all types of dye labeled primers and probes.

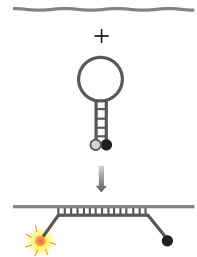
### TaqMan Probes

TaqMan (also known as Fluorogenic 5' nuclease assay) probes contain two dyes, a reporter dye (e.g. 6-FAM) at the 5' end and a 3' acceptor dye, usually TAMRA or a Black Hole Quencher.



### Molecular Beacons

Molecular Beacons synthesized by Gene Link have better than 50:1 signal to background ratio, usually in the range of 200. The purity is greater than 99% as judged by polyacrylamide gel electrophoresis. All dye conjugations are available. Please see our web site for complete details and specifications.



### Purification

Gene Link recommends gel purification of all modified primers and probes.

ORDER ONLINE AT [WWW.GENELINK.COM](http://WWW.GENELINK.COM)

## Applications and Modifications

Application	Recommended Modifications
<b>Real-Time PCR probes, QPCR</b>	<ul style="list-style-type: none"> <li>C-5 methylated pyrimidine deoxynucleosides behave similar to LNA bases in imparting duplex stability.</li> <li>The use of LNA bases renders the probe greater duplex stability than the use of single MGB (minor groove binders) at the 3' end. It is an excellent substitute for TaqMan MGB probes.</li> <li>All types of fluorescent dyes and backbone modifications can be performed for <i>in situ</i> detection.</li> </ul>
<b>SNP Genotyping, Allelic Discrimination</b>	<ul style="list-style-type: none"> <li>LNA substituted bases impart greater specificity with higher <math>T_m</math>.</li> <li>All types of fluorescent dyes and backbone modifications can be performed.</li> <li>C-5 methylated pyrimidine deoxynucleosides behave similar to LNA bases in imparting duplex stability.</li> </ul>

### Fluorophore Absorbance and Emission Data\*

Dye	Color	Absorbance Max (nm)	Emission Max (nm)	Extinction Coefficient	Price (\$)/site	
					Probes with dye, quencher & gel purification 200 nmol scale	Dye-labeled primers 200 nmol scale
6-FAM (Fluorescein)	Green	494	525	74850	290.00	110.00
TET	Orange	521	536	85553	290.00	110.00
HEX	Pink	535	556	95698	290.00	110.00
Cy 5	Violet	646	667	250000	450.00	390.00
Cy 5.5	Blue	683	707	190000	540.00	490.00
Cy 3	Red	552	570	150000	450.00	390.00
Cy 3.5	Purple	588	604	150000	540.00	490.00
Cy 7	Near IR	743	767	200000	540.00	490.00
Tamra	Rose	565	580	87000	540.00	490.00
ROX	Purple	587	607	105000	540.00	490.00
JOE	Mustard	528	554	105000	540.00	490.00
Dabcyl (Quencher)					453	290.00
BHQ-1,2,3** (Quencher)					534, 579, 672	290.00

\*Color and fluorescence data vary with pH. Consult appropriate dye manufacturer for details.

### Fluorescent Probes \*Price List and \*\*Guaranteed Yield

	50 nmol scale		200 nmol scale		1µmol scale	
	Price(\$)	Yield	Price(\$)	Yield	Price(\$)	Yield
6-FAM (Fluorescein), TET, HEX	220.00	10 nmols	290.00	20 nmols	390.00	40 nmols
Cy 3 & 5 Series dyes	290.00	5 nmols	450.00	10 nmols	590.00	20 nmols
NHS dyes	Not Available		540.00	8 nmols	690.00	16 nmols

\*Pricing subject to change without notice. Price includes purification. Royalty charges are additional.

\*\*Guaranteed yield for dye and quencher listed. Lower yield with additional modifications.

### Purification

Product	Price (\$)/purification		
	50 nmol	200 nmol	1 µmol
Gel Purification	75.00	75.00	150.00
Reverse Phase Cartridge	30.00	30.00	90.00

\*Pricing subject to change without notice

## The Gene Link Advantage

- Stringent Quality Control Measures
- All combinations of Dyes, Modifications and Quenchers Available
- Chimeric Fluorescent Molecular Probes Synthesized
- Polyacrylamide Gel Picture of Each Primer and Probe
- All Oligo Types With Dyes and Quenchers Synthesized
- Easy Online Ordering System
- Shipped in Amber Tubes to Prevent Photo-bleaching
- Knowledgeable Technical Support
- Personalized, Friendly Customer Service

**GOLD STANDARD**

## Expert Design Assistance

Gene Link routinely assists customers in designing novel probes with unique properties.

Contact us if you require assistance.