

# Probe and Primer Comparison Chart

qPCR CHEMISTRIES	TAQMAN®	MOLECULAR BEACONS	AMPLIFLUOR® PRIMERS	SCORPION™ PRIMERS	PLEXOR™ PRIMERS	BHQplus™ PROBES
STRUCTURE	Linear 	Stem and Loop 	Stem and Loop with Primer 	Stem and Loop with Primer 	Labeled Primers with Modified Bases 	Linear 
KEY TRAITS	<ul style="list-style-type: none"> <li>» Dual-labeled, linear, sequence specific probe</li> <li>» Used with a pair of forward and reverse primers</li> </ul>	<ul style="list-style-type: none"> <li>» Dual-labeled hairpin probe with sequence specific loop</li> <li>» Used with a pair of forward and reverse primers</li> </ul>	<ul style="list-style-type: none"> <li>» Dual-labeled hairpin with sequence specific primer</li> <li>» One reverse primer</li> </ul>	<ul style="list-style-type: none"> <li>» Dual-labeled hairpin probe with sequence specific loop and primer</li> <li>» One reverse primer</li> </ul>	<ul style="list-style-type: none"> <li>» One forward primer, with modified iso-dC and 5' fluorophore</li> <li>» Modified iso-dG with quencher in reaction mix</li> </ul>	<ul style="list-style-type: none"> <li>» Same key traits as TaqMan Probes</li> <li>» Compact oligos fortified for binding stabilization</li> </ul>
SPECIFICITY	****	*****	***	*****	***	*****
ADVANTAGES	<ul style="list-style-type: none"> <li>» Simplicity of design</li> <li>» Great value with powerful multiplexing capabilities</li> </ul>	<ul style="list-style-type: none"> <li>» Very low baseline fluorescence</li> <li>» High level of specificity with hairpin structure</li> <li>» Excellent Signal:Noise</li> </ul>	<ul style="list-style-type: none"> <li>» Very low baseline fluorescence</li> <li>» Easily adaptable for different applications</li> </ul>	<ul style="list-style-type: none"> <li>» Unimolecular structure incorporates both probe and primer</li> <li>» Fast amplicon detection</li> <li>» Excellent Signal:Noise</li> </ul>	<ul style="list-style-type: none"> <li>» Simplest to design (only primers)</li> <li>» Does not require a separate probe</li> <li>» Powerful multiplexing capabilities</li> </ul>	<ul style="list-style-type: none"> <li>» Shortened sequences permits enhanced target specificity</li> <li>» Discriminate difficult targets such as SNPs and AT-rich regions</li> </ul>
DESIGN SOFTWARE	RealTimeDesign™ (Free!)	Beacon Designer PREMIER Biosoft	RealTimeDesign (Free!)	Beacon Designer PREMIER Biosoft	Promega Plexor Primer Design Software	RealTimeDesign™ (Free!)
COMMON APPLICATIONS	Gene Expression In-Vitro Diagnostics Allelic Discrimination	Gene Expression In-Vitro Diagnostics Allelic Discrimination	SNP Detection Gene Expression	Gene Expression SNP Detection In-Vitro Diagnostics Allelic Discrimination	Gene Expression SNP Genotyping	SNP Genotyping

## Probe and Primer Products & Pricing

This is a sample list of our various probe and primer formats. Larger synthesis scales and alternative dyes are also available. For Biosearch Technologies' complete panel of dye-quencher combinations, please visit: [www.biosearchtech.com](http://www.biosearchtech.com) or call **1.800.GENOME.1**

<b>Quick Reference</b>	CAL Fluor Gold 540 replacement for TET	CAL Fluor Red 590 replacement for TAMRA	Quasar 670 replacement for CY5™
	CAL Fluor Orange 560 replacement for VIC/HEX/JOE	CAL Fluor Red 610 replacement for Texas Red®	Quasar 705 replacement for CY5.5™
	Quasar 570 replacement for CY3™	CAL Fluor Red 635 replacement for LC Red 640®	

### TaqMan Probes

5' Label	5' Ex/Em (nm)	3' Label	Catalog #	Synthesis Scale	Delivered Amount	Price
FAM ValuProbe™ (single RP-HPLC)	495 / 520	BHQ-1	DLO-RFB-5	50 nmol	10 nmol	\$95
FAM (dual HPLC)	495 / 520	BHQ-1	DLO-FB1-5	100 nmol	10 nmol	\$150
FAM	495 / 520	TAMRA	DLO-FT-25	25 nmol	5 nmol	\$120
TET	521 / 536	BHQ-1	DLO-TEB1-25	25 nmol	5 nmol	\$120
TET	521 / 536	TAMRA	DLO-TET-25	25 nmol	5 nmol	\$120
CAL Fluor Gold 540	522 / 544	BHQ-1	DLO-CGB1-25	25 nmol	5 nmol	\$120
JOE	529 / 536	BHQ-1	DLO-JB1-2	200 nmol	10 nmol	\$450
HEX	535 / 556	BHQ-1	DLO-HB1-25	25 nmol	5 nmol	\$120
CAL Fluor Orange 560	538 / 559	BHQ-1	DLO-COB1-25	25 nmol	5 nmol	\$120
Quasar 570	548 / 566	BHQ-2	DLO-Q5B2-25	25 nmol	5 nmol	\$120
TAMRA	555 / 576	BHQ-2	DLO-TB2-25	25 nmol	5 nmol	\$120
CAL Fluor Red 590	569 / 561	BHQ-2	DLO-C590B2-25	25 nmol	5 nmol	\$120
ROX	586 / 610	BHQ-2	DLO-RB2-2	200 nmol	10 nmol	\$450
CAL Fluor Red 610	590 / 610	BHQ-2	DLO-CAB2-25	25 nmol	5 nmol	\$120
Texas Red	595 / 615	BHQ-2	DLO-TRB2-2	200 nmol	10 nmol	\$500
CAL Fluor Red 635	618 / 637	BHQ-2	DLO-C635B2-5	50 nmol	3 nmol	\$255
Quasar 670	647 / 667	BHQ-2	DLO-Q6B2-25	25 nmol	5 nmol	\$120
Quasar 705	644 / 705	BHQ-2	DLO-Q7B2-5	50 nmol	3 nmol	\$230

### Black Hole Scorpions™ Probes and Primer

5' Label	5' Ex/Em (nm)	3' Label	Catalog #	Synthesis Scale	Delivered Amount	Price
FAM	495 / 520	Internal BHQ-1	SCP-FB1-2	200 nmol	10 nmol	\$450
CAL Fluor Gold 540	522 / 544	Internal BHQ-2	SCP-CGB1-2	200 nmol	10 nmol	\$500
CAL Fluor Orange 560	538 / 559	Internal BHQ-1	SCP-COB1-2	200 nmol	10 nmol	\$500
Quasar 570	548 / 566	Internal BHQ-2	SCP-Q5B2-2	200 nmol	10 nmol	\$550
TAMRA	555 / 576	Internal BHQ-2	SCP-TB2-2	200 nmol	10 nmol	\$550
CAL Fluor Red 590	569 / 591	Internal BHQ-2	SCP-C590B2-2	200 nmol	10 nmol	\$500
CAL Fluor Red 610	590 / 610	Internal BHQ-2	SCP-CAB2-2	200 nmol	10 nmol	\$500
CAL Fluor Red 635	618 / 637	Internal BHQ-2	SCP-C635B2-2	200 nmol	5 nmol	\$500
Quasar 670	647 / 667	Internal BHQ-2	SCP-Q6B2-2	200 nmol	5 nmol	\$600
Quasar 705	644 / 705	Internal BHQ-2	SCP-Q7B2-2	200 nmol	5 nmol	\$600

### BHQplus™ Probes

5' Label	5' Ex/Em (nm)	3' Label	Catalog #	Synthesis Scale	Delivered Amount	Price
FAM	495 / 520	BHQ-1	DLO-FBP-5	50 nmol	10 nmol	\$255
TET	521 / 536	BHQ-1	DLO-TBP-5	50 nmol	10 nmol	\$255
CAL Fluor Orange 560	538 / 559	BHQ-1	DLO-CBP-5	50 nmol	10 nmol	\$255

### Molecular Beacons

5' Label	5' Ex/Em (nm)	3' Label	Catalog #	Synthesis Scale	Delivered Amount	Price
FAM	495 / 520	BHQ-1	MBO-FB1-5	50 nmol	3 nmol	\$375
TET	521 / 536	BHQ-1	MBO-TEB1-5	50 nmol	3 nmol	\$400
CAL Fluor Gold 540	522 / 544	BHQ-1	MBO-CGB1-5	50 nmol	2 nmol	\$390
JOE	529 / 555	BHQ-1	MBO-JB1-2	200 nmol	10 nmol	\$500
HEX	535 / 556	BHQ-1	MBO-HB1-5	50 nmol	2 nmol	\$410
CAL Fluor Orange 560	538 / 559	BHQ-1	MBO-COB1-5	50 nmol	2 nmol	\$390
Quasar 570	548 / 566	BHQ-2	MBO-Q5B2-5	50 nmol	3 nmol	\$410
TAMRA	557 / 583	BHQ-2	MBO-TB2-5	50 nmol	2 nmol	\$390
CAL Fluor Red 590	569 / 591	BHQ-2	MBO-C590B2-5	50 nmol	2 nmol	\$380
ROX	586 / 610	BHQ-2	MBO-RB2-2	200 nmol	10 nmol	\$500
CAL Fluor Red 610	590 / 610	BHQ-2	MBO-CAB2-5	50 nmol	2 nmol	\$415
Texas Red	595 / 610	BHQ-2	MBO-TRB2-2	200 nmol	10 nmol	\$550
CAL Fluor Red 635	618 / 637	BHQ-2	MBO-C635B2-5	50 nmol	2 nmol	\$415
Quasar 670	647 / 667	BHQ-2	MBO-Q6B2-5	50 nmol	2 nmol	\$415
Quasar 705	644 / 705	BHQ-2	MBO-Q7B2-5	50 nmol	2 nmol	\$415

### Amplifluor Direct™ Primers

5' Label	5' Ex/Em (nm)	3' Label	Catalog #	Synthesis Scale	Delivered Amount	Price
FAM	495 / 520	Internal DABSYL	AMP-FD-2	200 nmol	10 nmol	\$360
CAL Fluor Orange 560	538 / 559	Internal DABSYL	AMP-COD-2	200 nmol	10 nmol	\$400
CAL Fluor Red 590	569 / 591	Internal DABSYL	AMP-C590D-2	200 nmol	10 nmol	\$445
CAL Fluor Red 610	590 / 610	Internal DABSYL	AMP-CAD-2	200 nmol	10 nmol	\$480
CAL Fluor Red 635	618 / 637	Internal DABSYL	AMP-C635D-2	200 nmol	10 nmol	\$480

### Plexor™ Primers

5' Label	5' Ex/Em (nm)	3' Label	Catalog #	Synthesis Scale	Delivered Amount	Price
FAM	495 / 520	N/A	PLX-1000-1	100 nmol	7 nmol	\$105
CAL Fluor Orange 560	538 / 559	N/A	PLX-1001-1	100 nmol	7 nmol	\$125
CAL Fluor Red 610	590 / 610	N/A	PLX-1002-1	100 nmol	7 nmol	\$125
Quasar 670	647 / 667	N/A	PLX-1003-1	100 nmol	7 nmol	\$125

Please visit [www.biosearchtech.com/products/plexor\\_order.asp](http://www.biosearchtech.com/products/plexor_order.asp) for Plexor Human Control Gene Primer Sets.



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