eurofins | **Genomics**

qPCR Probes
Dual Labelled Probes. Molecular Beacons. FRET Probes.

Advantages of using Eurofins Genomics

Eurofins Genomics has more than 20 years of experience in synthesizing modified oligonucleotides and probes.

As a service lab for food, species and forensic testing we have a significant expertise in probe based real-time PCR and know the functional and quality requirements for qPCR Probes.
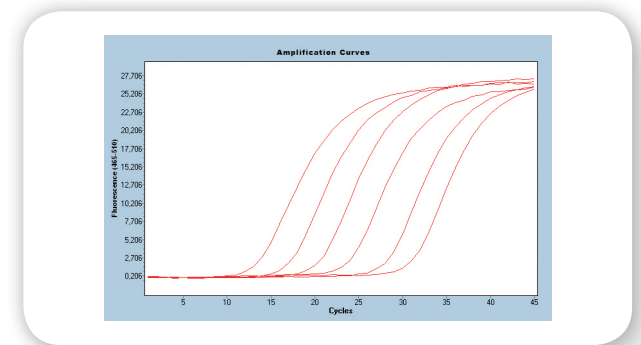
TaqMan® assay with a FAM–TAM Probe on a LightCycler® instrument.

Our quality commitment

- Each qPCR Probe is HPLC purified and subsequently checked by MALDI-TOF MS to ensure highest quality.
- The perfomance of our qPCR Probes is continuously confirmed by our Applied Genomics department.
- Our quality assurance is ISO 9001 & ISO 13485 certified to underline our commitment to deliver best quality products.

Documents & data sheets

Synthesis report, data sheet, delivery note and the quality report with the MALDI-TOF MS traces are provided for all qPCR Probes in your online account free of charge.

LightCycler® Probes.

Multiplex analysis with FRET probes

LightCycler® Probes for FRET (fluorescence resonance energy transfer) are hybridisation probes, that are highly specific for use in many techniques e.g. real-time PCR.

FRET probes consist of a donor and an acceptor, each labelled with a different fluorescent dye.
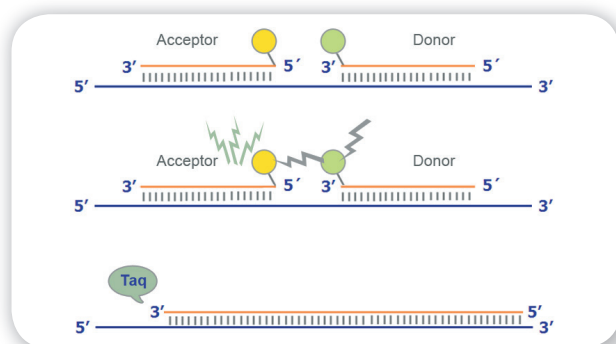
Principle of FRET.

Specify your LightCycler® Probes

Available at a final quantity of 1 nmol, 3 nmol, 5 nmol and 10 nmol:

ACCEPTOR	Abs [nm]	Em [nm]
ROX [ROX]	575	602
Texas Red [TxRed]	583	603
LightCycler 610 [LC610]	590	610
LightCycler 640 [LC640]	625	640
Cyanine5 [CY5]	649	670
Cyanine5.5 [CY55]	675	694

DONOR	Abs [nm]	Em [nm]
Fluorescein [FLU]	495	520

LightCycler® is a registered trademark of Roche Diagnostics.

Dual Labelled Probes.

Hydrolysis probes for TaqMan® assays

Dual Labelled Probes are designed to increase the efficiency and specificity of quantitative PCR and allow simultaneous detection of multiple targets in a single reaction. They are widely used in academic, food, environmental and medical research for:

- Gene expression analysis
- SNP & HLA genotyping
- Mutation detection & DNA quantification
- Verification of NGS and microarray results

Design your Dual Labelled Probes

5' FLUOROPHORE	Abs [nm]	Em [nm]	3' QUENCHER
FAM [FAM]	495	520	TAM, BHQ1, DAB, Eclip
TET [TET]	521	536	TAM, BHQ1
JOE [JOE]	520	548	TAM, BHQ1, BHQ2
Yakima Yellow [YAKYE]	530	549	BHQ1, Eclip
HEX [HEX]	535	556	TAM, BHQ1, BHQ2, Eclip
Cyanine3 [CY3]	552	570	BHQ1, BHQ2, BBQ650
ATTO 550 [ATTO550]	554	576	TAM, BHQ2
TAMRA [TAM]	544	576	BHQ2
ROX [ROX]	575	602	TAM, BHQ2, BBQ650
Texas Red [TxRed]	583	603	BHQ2, BBQ650
Cyanine3.5 [CY35]	588	604	BHQ2
LightCycler 610 [LC610]	590	610	BHQ2
LightCycler 640 [LC640]	625	640	BHQ2, BBQ650
ATTO 647N [ATTO647N]	644	669	BHQ2, BHQ3, BBQ650
Cyanine5 [CY5]	649	670	BHQ2, BHQ3, BBQ650
Cyanine5.5 [CY55]	675	694	BHQ2, BHQ3, BBQ650
ATTO 680 [ATTO680]	680	700	BHQ3, BBQ650

Table of available dye-quencher combinations.

TaqMan® is a registered trademark of Roche Molecular Systems, Inc.

Molecular Beacons.

Oligonucleotide hybridisation probes

Molecular Beacons are used for detecting specific sequences of nucleic acids. They are used in the following real-time assays:

- SNP & nucleic acid detection
- Real-time PCR quantification
- Diagnostic clinical assays
- Allelic discrimination and identification

Build your Molecular Beacons

5' FLUOROPHORE	Abs [nm]	Em [nm]	3' QUENCHER
FAM [FAM]	495	520	TAM, BHQ1, DAB, Eclip
TET [TET]	521	536	TAM, BHQ1
JOE [JOE]	520	548	TAM, BHQ1, BHQ2
HEX [HEX]	535	556	TAM, BHQ1, BHQ2, Eclip
Cyanine3 [CY3]	552	570	BHQ1, BHQ2, BBQ650
ATTO 550 [ATTO550]	554	576	TAM, BHQ2
TAMRA [TAM]	544	576	BHQ2
ROX [ROX]	575	602	TAM, BHQ2, BBQ650
Texas Red [TxRed]	583	603	BHQ2, BBQ650
Cyanine5 [CY5]	649	670	BHQ2, BHQ3, BBQ650

Table of available dye-quencher combinations.

Guaranteed yields for Dual Labelled Probes and Molecular Beacons

Synthesis scale [µmol]	0,01	0,05	0,2	1,0
Minimum yield [OD]	1	1,5	3	6

ISO 9001 CERTIFIED

ISO 13485 CERTIFIED