



## Product Specification

### OligoProber™ cDNA Amplification Detection Probes

Specific for RT-PCRmer™ Primer Sets

Ship: Ambient

Storage: -20°C

Content	Catalog No.	Product Description	Size
<input type="checkbox"/>	40-1101-02	OligoProber™ Human beta-actin; 2 nmols	2 nmols
<input type="checkbox"/>	40-1111-02	OligoProber™ Biotinylated Human beta-actin; 2 nmols	2 nmols
OligoProber™ Human beta-actin is specifically designed to be used with Gene Link product 40-1001-10; beta actin A Human RT-PCRmer™ (F1/R1); Exon 3; 10 nmols			
<input type="checkbox"/>	40-1102-02	OligoProber™ Rat beta-actin; 2 nmols	2 nmols
<input type="checkbox"/>	40-1112-02	OligoProber™ Biotinylated Rat beta-actin; 2 nmols	2 nmols
OligoProber™ Rat beta-actin is specifically designed to be used with Gene Link product 40-1002-10; beta actin Rat RT-PCRmer™ (F1/R1); Exon 3; 10 nmols			
<input type="checkbox"/>	40-1103-02	OligoProber™ Mouse beta-actin; 2 nmols	2 nmols
<input type="checkbox"/>	40-1113-02	OligoProber™ Biotinylated Mouse beta-actin; 2 nmols	2 nmols
OligoProber™ Mouse beta-actin is specifically designed to be used with Gene Link product 40-1003-10; beta actin A Mouse RT-PCRmer™ (F1/R1) 3' Region; 10 nmols			
<input type="checkbox"/>	40-1105-02	OligoProber™ GAPDH H/M/R; 2 nmols	2 nmols
<input type="checkbox"/>	40-1115-02	OligoProber™ Biotinylated GAPDH H/M/R; 2 nmols	2 nmols
OligoProber™ GAPDH H/M/R is specifically designed to be used with Gene Link product 40-1005-10; GAPDH A Human/Mouse/Rat RT-PCRmer™ (F1/R1) RT-PCRmer; 10 nmols			

Each tube supplied contains the lyophilized OligoProber™. Please refer to label on the specific tube. Each tube contains 2 nmols. The quantity supplied is sufficient for 20 to 40 hybridization assays using 20X20 cm membrane.

### Product Description

OligoProber™ are oligonucleotide probes specific for exon sequences. These are constructed specifically to be used with Gene Link RT-PCRmer™ cDNA amplification sets. The OligoProber™ can be used for all other applications where the complementary sequences are present. OligoProber™ probes are available for housekeeping genes that are ubiquitously expressed and serves as a positive control for northern and other expression studies. These are generally used as controls for measuring cDNA synthesis efficiency by reverse transcription and as controls for mRNA (cDNA) quantitative expression studies. OligoProber™ are supplied as a lyophilized powder in aliquots of 2 nmoles. The unlabeled probe can be labeled with <sup>32</sup>P using polynucleotide kinase and  $\gamma$ <sup>32</sup>P ATP. The biotinylated probe is used for non-radioactive using streptavidin HRP or Alkaline phosphatase.

Oligo probe purity is greater than 98% as determined by denaturing polyacrylamide gel electrophoresis.

## Reconstitution

Recommended reconstitution is at a concentration of 20  $\mu\text{M}$  (20 pmol/  $\mu\text{L}$ ) in RNase-free DEPC treated water or RNase-free TE pH 7.0.

- 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.
- Dissolve the supplied 2 nmols lyophilized OligoProber™ in 100  $\mu\text{L}$  sterile TE pH 7.5. The 2 nmols of probe when dissolved in 100  $\mu\text{L}$  will give a solution of 20  $\mu\text{M}$  i.e. 20 pmols/ $\mu\text{L}$ .
- Store at  $-20^{\circ}\text{C}$  or below after reconstitution.

## Probe Use

The unlabeled probe can be labeled with  $^{32}\text{P}$  using polynucleotide kinase and  $\gamma\text{-}^{32}\text{P}$  ATP. The biotinylated probe is used for non-radioactive using streptavidin HRP or Alkaline phosphatase.

## Radioactive Labeling & Detection

Follow established laboratory method. An example of a typical labelling reaction is given below.

Radioactive Labeling with T4 Polynucleotide Kinase (PNK)	
OligoProber™	1 $\mu\text{L}$ (20 pmol, up to 50 pmol can be used)
10X T4PNK Reaction Buffer	5 $\mu\text{L}$
$[\gamma\text{-}^{32}\text{P}]$ ATP	5 $\mu\text{L}$ of 50 pmol of $[\gamma\text{-}^{32}\text{P}]$ ATP/ $\mu\text{L}$
T4 PNK	2 $\mu\text{L}$ (20 units)
Water	up to 50 $\mu\text{l}$
Total Volume	50 $\mu\text{L}$
Incubate at $37^{\circ}\text{C}$ for 30 minutes. Heat inactivate by incubating at $65^{\circ}\text{C}$ for 20 minutes. Note: $[\text{}^{33}\text{P}]$ ATP may be substituted for $[\text{}^{32}\text{P}]$ ATP	

## Chemiluminescent Detection

Follow established laboratory methods

The reconstituted biotinylated OligoProber is at 20  $\mu\text{M}$  i.e. 20 pmols/ $\mu\text{L}$  solution. A recommended usage is 2 to 5  $\mu\text{L}$  (40 -100 pmols) for hybridization.

We suggest to use streptavidin-Alkaline Phosphatase (AP) instead of streptavidin-Horse Radish Peroxidase (HRP) as AP gives better signal and can be used with chemiluminescent substrates.

This product detail does not contain detailed information about hybridization and detection protocol. Alternate protocol sources or existing laboratory methods should be followed for the following steps.

1. Northern or Southern blot hybridization if you are planning to perform blot hybridization.
2. In situ hybridization protocol is using in situ hybridization.
3. Streptavidin-Enzyme conjugate binding and washing.
4. Chemiluminescent detection protocol.

## Ordering Information

RT-PCRmer™	Catalog No.	Size
Human beta actin A RT-PCRmer™ (F1/R1); Exon 3	40-1001-10	10 nmols
Human beta actin B RT-PCRmer™ (F4/R3B); Exon 2-5	40-1021-10	10 nmols
Human beta actin C RT-PCRmer™ (F6/R1); 5'UTR-Exon 3	40-1022-10	10 nmols
Human beta actin D RT-PCRmer™ (F2/R2); Exon 4-3' UTR	40-1023-10	10 nmols
Human beta actin F RT-PCRmer™ (F6/R2); 5' UTR- 3' UTR	40-1024-10	10 nmols
Human beta actin G RT-PCRmer™ (F4/R1); Exon 2-3	40-1025-10	10 nmols
Human beta actin TM RT-PCRmer™ for Taqman assay (F2/R3); Exon 4-5	40-1026-10	10 nmols
Human beta actin TaqMan Probe (F2/R3); Exon 5	40-1027-02	2 nmols
Human beta actin MB RT-PCRmer™ for Molecular Beacon assay (F2/R3B); Exon 4-5	40-1028-10	10 nmols
Human beta actin Molecular Beacon Probe (F2/R3B); Exon 5	40-1029-02	2 nmols
Mouse beta actin A RT-PCRmer™ (F1/R1); Exon 2-3	40-1003-10	10 nmols
Mouse beta actin B RT-PCRmer™ (F2/R2); Exon 6-7	40-1014-10	10 nmols
Mouse beta actin C RT-PCRmer™ (F3/R3); Exon 2-7	40-1015-10	10 nmols
Mouse beta actin D RT-PCRmer™ (F4/R4); Exon 2-9	40-1016-10	10 nmols
GAPDH A RT-PCRmer™ (F1/R1); Exon 2-3	40-1005-10	10 nmols
GAPDH B RT-PCRmer™ (F2/R2); Exon 6-7	40-1006-10	10 nmols
GAPDH C RT-PCRmer™ (F1/R2); Exon 2-7	40-1007-10	10 nmols
GAPDH D RT-PCRmer™ (F1/R3); Exon 2-9	40-1008-10	10 nmols
rat beta actin RT-PCRmer;	40-1002-10	10 nmols
mouse beta actin RT-PCRmer;	40-1003-10	10 nmols
beta2 microglobulin RT-PCRmer;	40-1004-10	10 nmols
Beta actin control PCR mix (human & rat)	40-1002-00	200 uL

OligoProber™	Catalog No.	Size
OligoProber™ Human beta-actin; 2 nmols	40-1101-02	2 nmols
OligoProber™ Biotinylated Human beta-actin; 2 nmols	40-1111-02	2 nmols
OligoProber™ Rat beta-actin; 2 nmols	40-1102-02	2 nmols
OligoProber™ Biotinylated Rat beta-actin; 2 nmols	40-1112-02	2 nmols
OligoProber™ Mouse beta-actin; 2 nmols	40-1103-02	2 nmols
OligoProber™ Biotinylated Mouse beta-actin; 2 nmols	40-1113-02	2 nmols
OligoProber™ GAPDH H/M/R; 2 nmols	40-1105-02	2 nmols
OligoProber™ Biotinylated GAPDH H/M/R; 2 nmols	40-1115-02	2 nmols

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