



Suite 4/209 Taylor Street  
Blockhouse Bay  
Auckland 1007  
New Zealand

# GeneDetect.com Ltd

Phone / Fax: 64-9-353-1320  
Email: [Info@GeneDetect.com](mailto:Info@GeneDetect.com)

## GeneDetect™ One-Step ANTISENSE RNA probe synthesis template (*OptiScript*™ T7 promoter)

- Code: GD1001-RT (produces 80mer antisense riboprobe®)
- Target: **Your target gene mRNA**
- Probe specificity: Antisense riboprobe® transcribed from the template hybridizes to nucleotides xxx-xxx located within the coding region of NM\_XXXXX.
- Hybridization parameters: Tm, XXX, internal stability 3' delta G, -XXX  
GC clamp, XXX
- Template supplied as: 100mer dsDNA containing *OptiScript*™ T7 promoter  
Form: Lyophilized  
Size: 50ug per vial  
Purification: Gel purified, >99% double stranded, full length
- Quality Control: By gel electrophoresis  
Handling/Storage: Reconstitute in 150ul autoclaved water or TE buffer.  
Store at -20°C (DO NOT use DEPC-treated solutions).
- Applications: In vitro transcription of antisense riboprobe®.
- Effective Concentration: Use 0.5-1.0ug of template in a standard 10ul Riboprobe® In vitro transcription reaction with 40U of either T7, T3 or SP6.
- Suggested Use: Perform the in vitro transcription reaction at 30°C. This will increase the percentage of full length riboprobe® transcribed from the template. To reduce premature termination of transcription always ensure limiting dNTP concentration > 12uM.
- Perform in vitro transcription with high quality reagents.
- Promega Riboprobe® System – T7, Cat # 1440  
Promega Riboprobe® System – T3, Cat # 1430  
Promega Riboprobe® System – SP6, Cat # 1420

## **Storage and stability.**

Standard lyophilized GeneDetect™ One-Step RNA probe synthesis templates are stable for many years if they are stored frozen at -20°C.

A slightly alkaline buffer prevents possible depurination of the template. In an acid buffer A and G bases are eliminated, leading to template damage. TE buffer is the preferred solution for template storage. However nuclease free distilled water can be used in place of TE buffer.

While templates are very stable they are prone to BACTERIAL attack. Use autoclaved tips and tubes.

### Storage versus (stability)

Dissolved at 25°C (1 week to 3 months)

Lyophilized at 25°C (2 months to 1 year)

Dissolved (<<15µM) at -20°C (1 year to 3 years)

Dissolved (>15µM) at -20°C (3 years+)

Lyophilized at -20°C (indefinite)

Repeated freeze-thawing can dramatically lower the shelf life of the template.

## **Resuspending the GeneDetect™ One-Step RNA probe synthesis template**

Centrifuge the tube for a few seconds to ensure the template is fully collected at the bottom of the tube. Carefully open tube, add an appropriate amount of TE buffer or sterile nuclease free water (150ul) close, allow to rehydrate for 2 minutes. Mix the tube by hand for a minute before using a vortex on the solution for 15 seconds. Re-centrifuge the solution. Aliquot and/or store the template.

All scientific enquiries to [Scientific@GeneDetect.com](mailto:Scientific@GeneDetect.com)