RISH™ RNA Positive Control Probe

Hybridization Probe
902-8001-040824

Available Product Formats	
Catalog Number	Volume
OPPR8001T60	60 tests

Intended Use:
For Research Use Only. Not for use in diagnostic procedures.

Background Information:
This digoxigenin-labeled oligonucleotide probe recognizes human 28S ribosomal RNA within tissue sections[1,2]. This probe can be used as a control when running specific RNA targeting probes. It should be used to assess RNA integrity in FFPE tissue sections. Weak or light staining in a test sample indicates that specifically targeted mRNA may be compromised.

Known Applications:
in situ hybridization (Formalin-fixed paraffin embedded tissue)

Materials and Methods:

Reagents Provided:

Kit Catalog No.	Component Description	Quantity x Volume
OPPR8001T60	RISH™ RNA Positive Control Probe	1 x 10.5 mL

* Refer to the Biocare Medical website located at http://biocare.net for information regarding catalog numbers and ordering.

Reconstitution, Dilution and Mixing:
The RISH™ RNA Positive Control Probe kit reagent(s) are optimized and ready to use with Biocare ISH probes and ancillary reagents. No reconstitution, mixing, dilution, or titration is required.

Species Reactivity:
Human 28S ribosomal RNA

Supplied As:
Digoxigenin-labeled 28S rRNA probe provided in hybridization buffer containing dextran sulfate and nuclear acid carriers.

Storage and Stability:
Store at 2ºC to 8ºC. The product is stable to the expiration date printed on the vial label when stored under these conditions. Do not use after expiration date. Storage under any condition other than those specified must be verified. The kit reagent(s) are ready-to-use and should not be diluted. The stability of user diluted reagent has not been established by Biocare.

Staining Protocol Recommendations
The following programming and protocol recommendations are to assist the user when staining using Biocare's ONCORE Pro X Automated Staining Platform for research applications. The user is responsible for further optimizations of the protocol.

RISH™ RNA Positive Control Probe is provided in vials ready for use on the ONCORE Pro X Automated Slide Stainer. Uncap the vial and place in the ONCORE Pro X reagent tray. The ONCORE Pro X Automated Slide Stainer will apply reagent as required in the selected protocol. Refer to the appropriate probe data sheet for the recommended staining protocol. Refer to the ONCORE Pro X Automated Slide Staining System User Manual for detailed instructions on instrument operation and additional protocol options.

Technical Notes:
1. This RNA positive control probe should be used with RISH™ specific RNA probes (i.e. EBER, RNA negative control) to assess the presence of intact mRNA in test samples. The test should be performed on tissue sections where the presence of intact cytoplasmic RNA is anticipated. 4-5 micrometer (µm) sections are sufficient to conduct the study. Preferably, the sections should be fresh and no more than 30 days old.
2. If probe appears cloudy, briefly vortex and heat to hybridization temperature (55°C) before application. The use of probe in amounts less than recommended may lead to inconsistent results.

Limitations:
This product is provided for Research Use Only (RUO) and is not for use in diagnostic procedures. Suitability for specific applications may vary and it is the responsibility of the end user to determine the appropriate application for its use.

Precautions:
1. Kit reagent(s) contain less than 0.1% sodium azide. Concentrations less than 0.1% are not reportable hazardous materials according to U.S. 29 CFR 1910.1200, OSHA Hazard communication and EC Directive 91/155/EC. Sodium azide (NaN_3) used as a preservative is toxic if ingested. Sodium azide may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing. (Center for Disease Control, 1976, National Institute of Occupational Safety and Health, 1976)[4]
2. Handle materials of human or animal origin as potentially biohazardous and dispose of such materials with proper precautions. In the event of exposure, follow the health directives of the responsible authorities where used.[5,6]
3. Specimens, before and after fixation, and all materials exposed to them should be handled as if capable of transmitting infection and disposed of with proper precautions. Never pipette reagents by mouth and avoid contacting the skin and mucous membranes with reagents and specimens. If reagents or specimens come into contact with sensitive areas, wash with copious amounts of water.[7]
4. Microbial contamination of reagents may result in an increase in nonspecific staining.
5. Incubation times or temperatures other than those specified may give erroneous results. The user must validate any such change.
6. Do not use reagent after the expiration date printed on the vial.
7. The reagent is optimized for use with Biocare probes and ancillary reagents. Refer to the probe and other ancillary reagent instructions for use for recommended protocols and conditions for use.
8. Follow local and/or state authority requirements for method of disposal.
9. The SDS is available upon request and is located at http://biocare.net.

Technical Support:
Contact Biocare's Technical Support at 1-800-542-2002 for questions regarding this product.

References:
1. Lee D, Xiong S, Xiong WC. General introduction to in situ hybridization protocol using nonradioactively labeled probes to detect mRNAs on tissue sections. Methods Mol Biol. 2013;1018:165-74.
2. Paillasson S, *et al*. In situ hybridization in living cells: detection of RNA molecules. Exp Cell Res. 1997 25:231(1):226-33.
3. Wilkinson DG. In Situ Hybridization, A Practical Approach, Oxford University Press (1992) ISBN 0 19 963327 4.
4. Center for Disease Control Manual. Guide: Safety Management, NO. CDC-22, Atlanta, GA. April 30, 1976 "Decontamination of Laboratory Sink Drains to Remove Azide Salts.
5. Occupational Safety and Health Standards: Occupational exposure to hazardous chemicals in laboratories. (29 CFR Part 1910.1450). Fed. Register.

Biocare Medical
60 Berry Drive
Pacheco, CA 94553
USA

Tel: 800-799-9499 | www.biocare.net | Fax: 925-603-8080

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References Cont'd:
6. Directive 2000/54/EC of the European Parliament and Council of 18 September 2000 on the protection of workers from risks related to exposure to biological agents at work.
7. Clinical and Laboratory Standards Institute (CLSI). Protection of Laboratory Workers from Occupationally Acquired Infections; Approved Guideline-Fourth Edition CLSI document M29-A4 Wayne, PA 2014.

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