

Product **RISH Rembrandt® Biotin<sup>1</sup> and Digoxigenin<sup>2</sup> labelled RNA probes** (patents pending)  
Code **XxxxP.xx00**

**Technical specifications**

Cat. No.	Label	DNA Probe specifications		
		Description	Size	Region
A500P.0100 A500P.9900	BIO DIG	Epstein-Bar virus small RNA's probe (PROBE xxx EBER)*	30-mer oligonucleotide	mixture of 5 oligonucleotides complementary to Epstein-Bar encoded small RNA's
C601P.0100 C601P.9900	BIO DIG	Kappa light chain mRNA probe (PROBE xxx Kappa)	30-mer oligonucleotide	mixture of 10 oligonucleotides complementary kappa light chain mRNA's
C602P.0100 C602P.9900	BIO DIG	Lambda light chain mRNA probe (PROBE xxx Lambda)	30-mer oligonucleotide	mixture of 10 oligonucleotides complementary lambda light chain mRNA's

\* xxx = label (BIO or DIG)

**Contents**  
 - clear vial, yellow cap = BIO labelled probe; 0.8 mL (25-40 assays)  
 - clear vial, purple cap = DIG labelled probe; 0.8 mL (25-40 assays)

**Format**  
 : ready to use

**Application**  
 : colorimetric detection of respective RNA in human specimen by *in situ* hybridisation (ISH)

**Detection limit**  
 : 10-30 pg by filter hybridisation

**Storage**  
 : refrigerated (2-8 °C); do not freeze

**Stability**  
 : until expiry date printed on label

**Precautions**  
 : - it is important to work RNase free in the period between deparaffinisation and hybridisation; wear gloves and incubate laboratory materials overnight at 200°C before use  
 - homogenise solutions before use  
 - avoid contact with eyes and skin; do not swallow

**Related products**

Universal RISH and detection kits: product code: A000K.0105, A000K.0101, A000K.9905 or A000K.9901  
 Please contact your local supplier for further information.

**VIAL - LABEL**

**GUIDE REFERENCE RISH PROBES**

PRE-TRAITEMENT DES SECTIONS PARAFFINEES  
 TRAITEMENT PROTEOLYTIQUE

**PROTOCOLE D'HYBRIDATION**

1. Ajoutez une goutte ou 20 µl d'une solution de sonde par échantillon et couvrez avec une lamelle
2. Hybridez 2-16 hrs 37°C incubateur
3. Diffusez verticalement le tampon TBS sur les lamelles
4. Rincez toutes les lames avec le tampon TBS

Continuer avec:  
 PROTOCOLE DE DETECTION ET DE COLORATION

**VIAL - LABEL**

**HANDLEIDING RISH PROBES**

SNLIJDEN EN PLAKKEN VAN PARAFFINE COUPES  
 PROTEOLYTISCHE VOORBEHANDELING

**HYBRIDISATIE PROCEDURE**

1. Incubeer elk preparaat met probe reagents; 1 druppel of 20 µl en dek af met dekglasaasje
2. Hybridiseer 2-16 uur bij 37°C stoof
3. Verwijder dekglasaasje door preparaten in TBS buffer te dompelen
4. Spoel alle preparaten in TBS buffer

Ga verder met:  
 DETECTIE EN TEGENKLEURINGSPROCEDURE

**GUIA DE REFERENCIA RISH PROBES**

PRETRATAMIENTO DE LOS CORTES DE PARAFINA  
 TRATTAMENTO PROTEOLITICO

**PROTOCOLO DE HIBRIDACION**

1. Añadir 1 gota o 20 µl de la solución de la sonda por muestra. Cubrir con un cubre.
2. Hibridizar 2-16 horas a 37°C en un incubador
3. Retirar los cubres sumergiendo los portas en tampón TBS
4. Lavar todos los portas en tampón TBS

Continuar con:  
 PROTOCOLO DE DETECCION Y TINCION

**METODICA D'USO RISH PROBES**

PRETRATTAMENTO DELLE SEZIONI IN PARAFFINA  
 TRATTAMENTO PROTEOLITICO

**PROCEDIMENTO DI IBRIDAZIONE**

1. Aggiungere 1 goccia o 20 µl di soluzione "probe" su ogni sezione. Coprire con coprivetrino.
2. Ibridizzare 2-16 ore a 37°C in incubatrice
3. Togliere il coprivetrino scia quando il vetrino in tampone TBS
4. Lavare tutti i vetrini in tampone TBS

Continue with:  
 PROCEDIMENTO DI DETEZIONE E COLORAZIONE

Purchase does not include the right to exploit this product commercially and any commercial use without the explicit authorization of PanPath BV is prohibited.

1 Digoxigenin (DIG) labeling and detection is protected by international patents of Roche Molecular Biochemicals. This product is supplied under a license of Roche Molecular Biochemicals. This product or the use of this product may be covered by one or more patents of Roche Molecular Biochemicals, including the following: EP patent 0324 474 (granted); U.S. patent 5.354.657 (granted).  
 2 The probes in this product are labelled with the Universal Linkage System (ULS™). This product or the use of this product may be covered by one or more patents of KREATECH Biotechnology BV, including, but not restricted to, the following: EP 0539466; US 5,580,990; US 5,714,327; WO 92/01699; WO 96/35696; WO 98/15564.

## Limitations of Procedure

**Product** RISH REMBRANDT® RNA Probes

- The REMBRANDT® RNA probes are solely applicable for the detection of corresponding RNA which may be present in cell preparations (paraffin sections, frozen sections or cytological specimen).
- Appropriate medical decisions are only possible if the medical traceability is ensured. The product is intended for professional use as an aid in the diagnosis corresponding to the RNA probes as supplied.
- Either human tissue sections or human cytological preparations may be used. Samples must be fixed in buffered formalin or alcohol. Sections should be cut at 4 µm thickness, glued to the glass slides with a bio-adhesive (e.g. organosilane), dried at room temperature, subsequently dried at 37 °C overnight, complete deparaffinisation in xylene and alcohol series and air dried. Cytological specimen should be prepared as required by the user, fixed with cytological fixation agent, rinsed in distilled water prior to the ISH procedure and air dried.
- Many factors can influence the performance of the ISH procedure. Failure in detection can be due to i.e. improper sampling, handling, the time lapse between tissue removal and fixation, the size of the tissue specimen in the fixation medium, the fixation time, processing fixed tissue, the thickness of the section, the bio-adhesive on the slide, deparaffinisation procedure, incubation times, proteolytic pre-treatment, detection reagents, incubation temperatures and interpretation of results.
- The performance of the ISH procedure is also affected by the sensitivity of the method and the DNA or RNA target load: in case the limit of the sensitivity is reached or when the target DNA or RNA load is too low, a false negative reaction may be the result.
- The clinical interpretation of the results should not be established on the basis of a single test result. A precise diagnosis, in fact, should take into consideration clinical history, symptoms, as well as morphological data. Negative results therefore do not rule out any possibility of a positive specimen.
- The REMBRANDT® test results are not to be relied on in case the sampling, sampling method, quality, sample preparation, reagents used, controls and procedure followed is not optimal.
- Therapeutic considerations based on the result of this test alone should not be taken. Positive results should be verified by other traditional diagnostic methods such as but not limited to clinical history, symptoms, as well as morphological data.
- The medical profession should be aware of risks and factors influencing the intensity, the absence or presence of probe signals which can not be foreseen when applying this test.
- The user should carefully consider the risk and use of sample material for this test in case the sample material does not contain sufficient or representative test material.
- Laboratory personnel performing the test should be knowledgeable and be able to interpret the test results.

## Interpretation of the results

First, check the negative and positive controls that have been incubated with the test slides simultaneously:

- The negative control should be really negative, i.e. not show any localised colour precipitations. If the negative control could be interpreted as being positive, discard the results since no conclusions can be drawn.
- The positive control should show colour precipitations in conformity with the localisation of the target DNA or RNA. The colour should show the proper shade and must be clearly visible in the preferential cell/ tissue type and correspond to the target localisation.

In the test slides, start under low power magnification and focus on localisation and colour to see whether:

- The positivity (colour precipitation) observed is localised in the cell type preferred by the target.
- The colour has the right shade (no endogenous or formalin pigment).

Use high power magnification to see whether:

- The positive staining texture (granular, etc), demarcation and localisation are conform the positive control staining pattern.

## Product in combination with other devices

The REMBRANDT® RNA probes are intended for stand-alone usage. The in vitro diagnostic is intended to be used in combination with standard formalin fixed, paraffin embedded tissue blocks, standard tissue freezing, tissue sectioning (microtome), standard cytological preparation methods, hot plate(s), stove(s), incubation device(s), water bath(s), temperature and incubation time control(s), proteolytic-, detection- and other reagents (not supplied with this reagent) and a microscope. The combination has been tested and validated. Since the standard formalin fixed, paraffin embedded tissue blocks, standard tissue freezing, tissue sectioning (microtome), standard cytological preparation methods, hot plate(s), stove(s), incubation device(s), water bath(s), temperature controls, incubation time control(s) and other not supplied reagents such as but not limited to proteolytic reagents, detection reagents and a microscope is not combined with the device as a product, conformity with the essential requirements is not applicable. Assay validation criteria are mentioned in 'Interpretation of the Results' and are also depending on the target load, which may influence the validation criteria.

## Specifications of the RNA probes:

	EBER	kappa <sup>1</sup>	lambda <sup>1</sup>
Specificity	100%	100%	100%
Sensitivity	85%	85%	85%

<sup>1</sup> The kappa and lambda probes do detect the respective RNA in plasma and large B-cells; the reactivity in small B-cells is much less, which is to be considered as a true limitation.

## References

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## VIAL - LABEL

### REFERENCE GUIDE RISHPROBES

PRETREATMENT OF PARAFFIN SECTIONS  
PROTEOLYTIC TREATMENT

#### HYBRIDIZATION PROCEDURE

1. Apply 1 drop or 20 µl of probe solution per specimen; cover with coverslip
2. Hybridize 2-16 hrs 37°C incubator
3. Remove coverslips by soaking slides in TBS buffer
4. Wash all slides in TBS buffer

Continue with:  
DETECTION AND STAINING PROCEDURE

### ANLEITUNG RISHPROBES

HERSTELLUNG VON PARAFFINSCHNITTEN  
PROTEOLYTISCHE BEHANDLUNG

#### HYBRIDISIERUNGSPROZEDUR

1. Tropfen oder 20 µl der Sonde auf jedes Präparat geben und mit einem Deckglas abdecken
2. Hybridisieren 2-16 Stunden bei 37°C Ofen
3. Entfernen der Deckgläser durch Eintauchen in TBS Puffer
4. Präparate in TBS Puffer spülen

Verfolge mit:  
DETEKTIONS-UND FARBEPROZEDUR