



Three Simple Steps:



Key Features:

- Fully Automated – baking through final coverslip
- High capacity & High throughput system
- Fast turnaround
- Crisp, intense, reliable and reproducible stains
- Ability to optimize protocols for customized intensity
- Eco-friendly - up to 75% reduced
 - Reagent consumption
 - Waste generation
- Easy inventory management with RFID driven system
- Reports for inventory management and regulatory compliance

In Situ Hybridization Probes

Ordering Information

Product Name (Pack size)	Cat. No. (Manual)	Cat. No. Automated)	Product Name (Pack size)	Cat. No. (Manual)	Cat. No. Automated)
Alu II Probe	PR026-100E	PR026-YADE	MYC	PR255-100E	PR255-YADE
Beta Actin	PR1055-100E	PR1055-YADE	TNF	PR266-100E	PR266-YADE
CerviPro HPV 14	PR251-100E	PR251-YADE	TTF1	PR267-100E	PR267-YADE
CerviPro HPV Type 16/18	PR250-100E	PR250-YADE	ALK	PR269-100E	PR269-YADE
EBER Probe	PR205-100E	PR205-YADE	BRCA2	PR268-100E	PR268-YADE
Kappa Probe	PR214-100E	PR214-YADE	CD68	PR270-100E	PR270-YADE
Lambda Probe	PR215-100E	PR215-YADE	PCNA	PR271-100E	PR271-YADE
Oligo d (T) Probe	PR217-100E	PR217-YADE	MPO	PR272-100E	PR272-YADE
Retinoblastoma (RB) Probe	PR225-100E	PR225-YADE	MRC1	PR273-100E	PR273-YADE
ABL1	PR261-100E	PR261-YADE	ARG1	PR274-100E	PR274-YADE
BCL2	PR262-100E	PR262-YADE	ARG2	PR275-100E	PR275-YADE
BRAF	PR263-100E	PR263-YADE	COL1A1	PR276-100E	PR276-YADE
JAK2	PR264-100E	PR264-YADE	SERPINE1	PR277-100E	PR277-YADE

ISH Detection Kit	Pack Size	Staining	Cat. No.
XISH One-Step Polymer-HRP ISH Detection Kit	50 Slides	Automated [Xmatrix]	DF400-YADE
Super Sensitive One-Step Polymer-HRP ISH Detection Kit	50 Slides	Manual	DF400-50KE



Xmatrix[®]ELITE
Microtome to Microscope

Xmatrix[®] ELITE assures accurate reagent dispensing by using liquid level sensor, even distribution of reagents on the specimen and up to 75% reduced reagent consumption via coverslip micro-chamber, precise temperature control on each slide by eXACT™ and eliminates cross contamination through the use of disposable pipette tips.

Xmatrix[®] ELITE maximizes the testing capacity, minimizes hands-on time, reduces errors and produces consistent and accurate results. This under-scores our commitment to provide a system to meet the needs of the molecular pathology laboratory of today, tomorrow and beyond...

Contact Information:

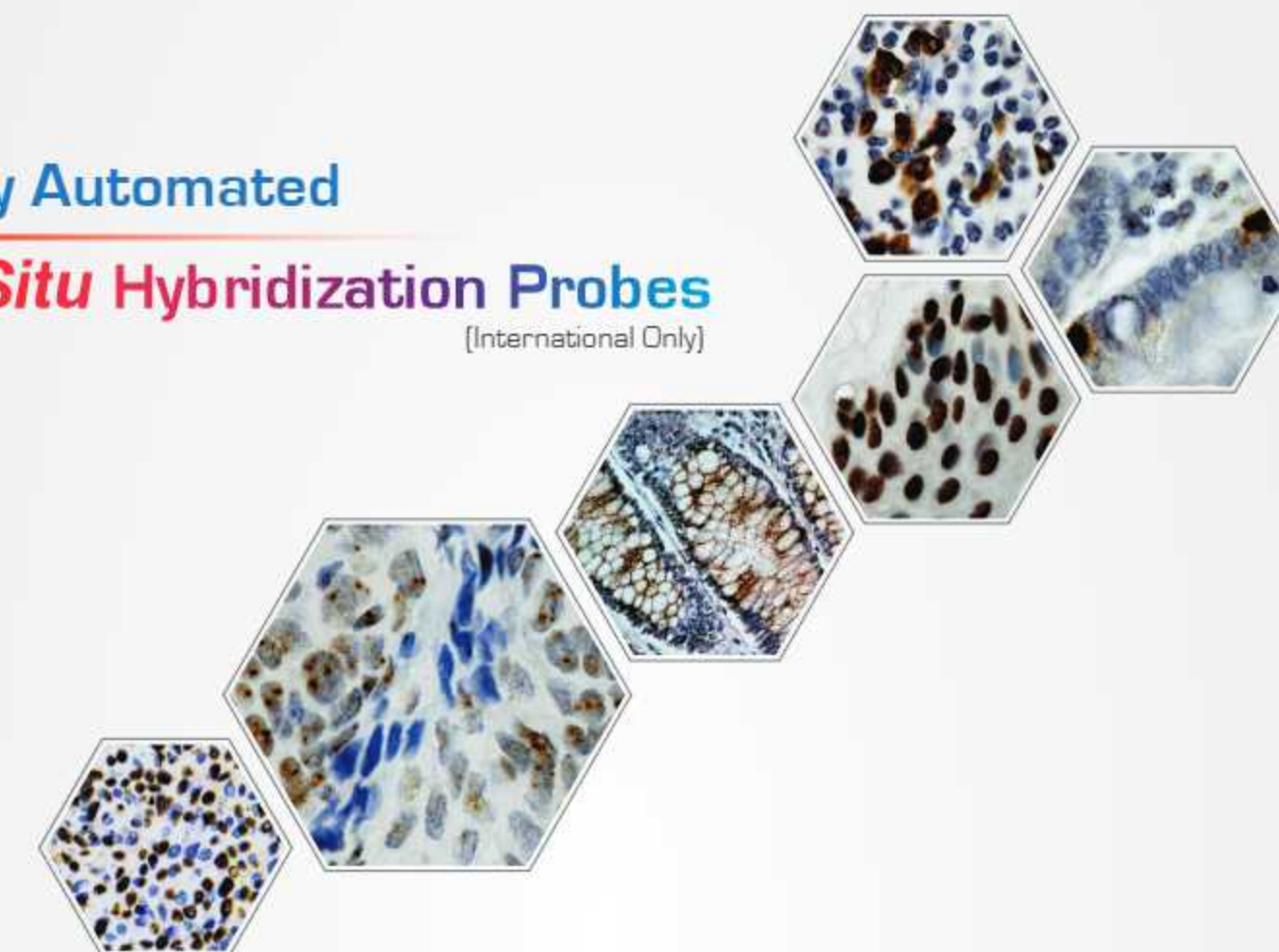
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NEW

Fully Automated
In Situ Hybridization Probes
(International Only)

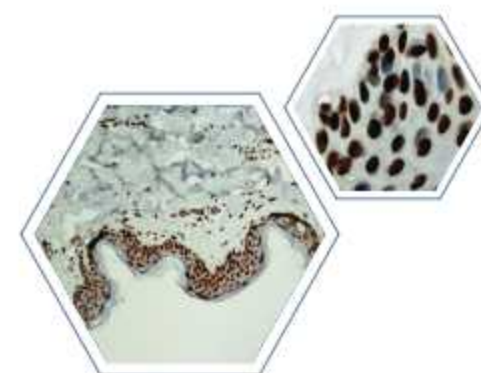


Clinically Relevant
Highly Specific for DNA and RNA Targets
Complementary with BioGenex ISH Detection Kits
HPV 16/18, Kappa, Lambda, EBER, RB1 and ...

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In Situ Hybridization Probes

BioGenex *in situ* hybridization (ISH) probes, detection kits and ancillaries are the components of an integrated system that works synergistically for the sensitive, reliable and easy-to-perform detection of specific DNA and RNA sequences in routine FFPE sections and in some cases cell smears. The detection is based on chromogenic *in situ* hybridization (CISH) which enables the user to gain genetic information in the context of tissue morphology using methods that are common in molecular pathology labs.



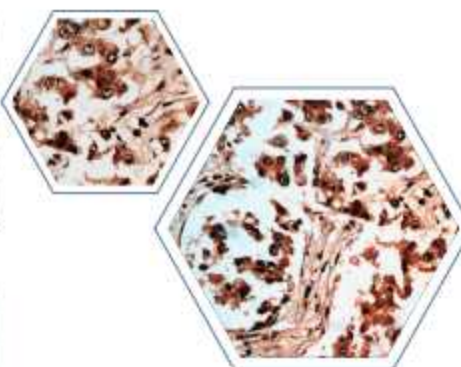
Alu II

The Alu II probe detects the Alu DNA sequence repeat found in the nucleus of human cells in FFPE tissue and is developed as a positive control for *in situ* hybridization detection. The probe is useful to determine the preservation of DNA during specimen collection, processing, fixation and handling. The Alu II ISH probe is also useful in identifying human tissues/cancers cells in mouse xenograft model.

Catalog No.: PR026-YADE (Xmatrix), PR026-100E (Manual)
Images: Alu II DNA staining of skin cancer tissue

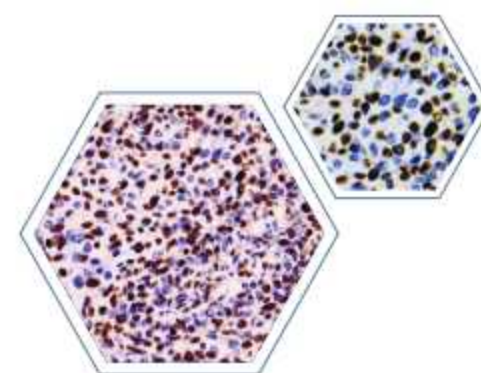
Beta-Actin

Actins are highly conserved proteins that participate in cell motility as well as cell structure and integrity. In normal cells, beta-actin mRNA is localized in cell protrusions where actin is actively polymerized, and this localization is correlated with the efficiency of cell motility. In tumor cells, the overexpression and altered localization of beta-actin mRNA are associated with tumor invasiveness and metastatic potential. Beta-actin mRNA is often used as an internal standard for *in situ* hybridization and Northern blot.



Catalog No.: PR1055-YADE (Xmatrix), PR1055-100E (Manual)
Images: Beta actin mRNA staining of breast cancer tissue

In Situ Hybridization Probes



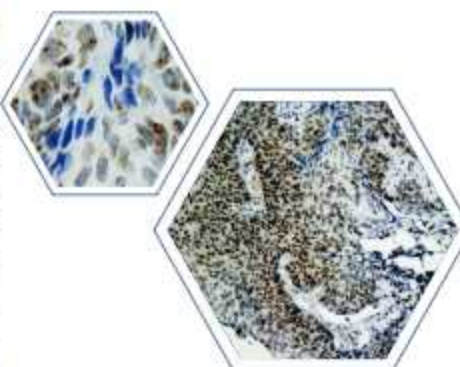
CerviPro HPV 14

The Cervipro HPV 14-probe cocktail employs a mixture of fluorescein-labeled DNA probes that detect the 14 HPV genotypes (16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66 and 68) that are considered high risk for the development of cervical cancer and its precursor lesions. The cocktail is designed for the *in situ* localization of HPV viral DNA sequences in cultured cell lines, cytopathology specimens and formalin-fixed, paraffin embedded (FFPE) tissue sections by use of the chromogenic *in situ* hybridization method to give the morphological context of the virus.

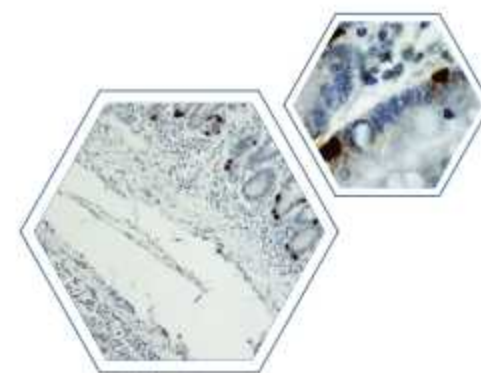
Catalog No.: PR251-YADE (Xmatrix), PR251-100E (Manual)
Images: HPV 14-genotype DNA staining of cervical carcinoma tissue

CerviPro HPV Type 16/18

The Cervipro HPV 16/18 Probe employs a mixture of fluorescein-labeled HPV 16- and HPV 18-specific DNA probes that detect the HPV types associated with cervical intraepithelial neoplasia (CIN) and carcinoma *in situ* (CIS). These two high-risk HPV types have been regarded as the genotypes most closely associated with progression to cervical cancer. The probe cocktail is designed for the *in situ* localization of HPV viral DNA sequences in cultured cell lines, cytopathology specimens and formalin-fixed, paraffin embedded (FFPE) tissue sections by use of the chromogenic *in situ* hybridization method to give the morphological context of the virus.



Catalog No.: PR250-YADE (Xmatrix), PR250-100E (Manual)
Images: HPV type 16/18 DNA staining of cervical carcinoma tissue



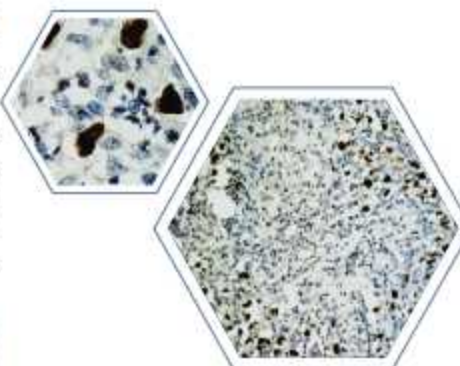
Cyclin D1*

Cyclin D1 is a G1 phase cyclin which regulates G1 phase progression and G1/S transition of the cell cycle. This regulatory protein is known to aberrantly express in mantle cell lymphomas (MCL) as a result of the t(11;14)(q13;q32)/CCND1-IGH. Overexpression of Cyclin D1 mRNA in MCL by *in situ* hybridization in FFPE tissue is also reported to be potentially useful in diagnosing and classifying low-grade B-cell lymphomas. Another study states that Cyclin D1 is a known breast cancer mRNA marker.

Catalog No.: PR216-YADE (Xmatrix), PR216-100E (Manual)
Images: Cyclin D1 RNA staining of small intestinal cancer tissue

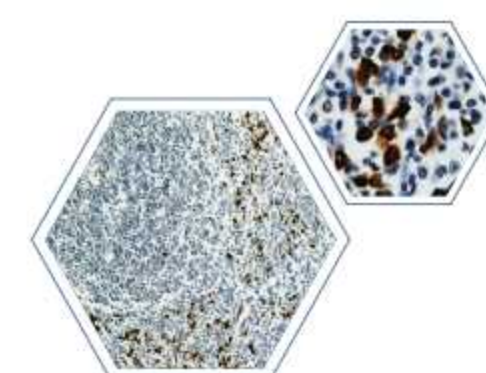
EBER

The Epstein-Barr virus (EBV), also known as human herpes virus 4, infects B cells of the immune system and epithelial cells. Once the virus's initial lytic infection is brought under control, EBV latently persists in the B cells for the rest of the individual's life. EBV is best known as the cause of infectious mononucleosis (glandular fever). In some cases, EBV contributes to the development of several uncommon types of cancer, such as Burkitt lymphoma, Hodgkin lymphoma and certain cancers of the nose and throat. The BioGenex EBV probe detects the Epstein-Barr early RNA (EBER) transcript.



Catalog No.: PR205-YADE (Xmatrix), PR205-100E (Manual)
Images: EBV-encoded RNA staining of Hodgkin lymphoma tissue

In Situ Hybridization Probes



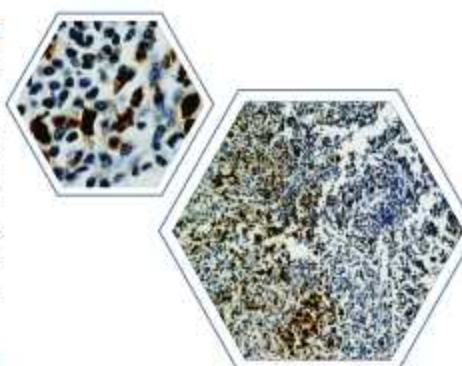
Kappa

The Kappa probe is designed for use with the Lambda probe for the detection of antibody producing B cells in formalin-fixed, paraffin-embedded tissue. As immunoglobulins from the same B cell contain either kappa or lambda light chains, restriction of either Kappa or Lambda mRNA denotes monoclonality of lymphoid neoplasms and can help distinguish between neoplastic and reactive lymphoid proliferations. The major disadvantage of immunoglobulin based IHC techniques is that they can detect secreted kappa/lambda fragments that are non-specifically bound to the cells as observed with Reed-Sternberg cells, whereas kappa/lambda ISH probes will only target the cells that are producing heavy or light chain [kappa/lambda] mRNA.

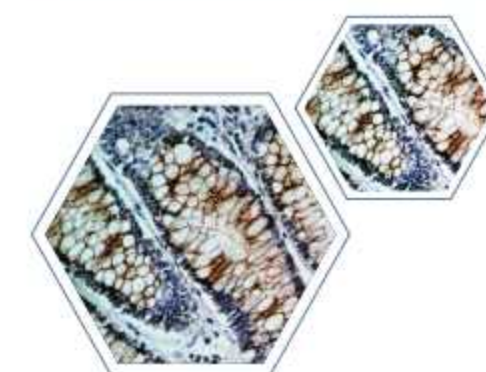
Catalog No.: PR214-YADE (Xmatrix), PR214-100E (Manual)
Images: Kappa light chain mRNA staining of tonsil

Lambda

The Lambda probe is designed for use with the Kappa probe for the detection of antibody producing B cells in formalin-fixed, paraffin-embedded tissue. As immunoglobulins from the same B cell contain either kappa or lambda light chains, restriction of either Kappa or Lambda mRNA denotes monoclonality of lymphoid neoplasms and can help distinguish between neoplastic and reactive lymphoid proliferations. The major disadvantage of immunoglobulin based IHC techniques is that they can detect secreted kappa/lambda fragments that are non-specifically bound to the cells, whereas kappa/lambda ISH probes will only target the cells that are producing heavy or light chain [kappa/lambda] mRNA.



Catalog No.: PR215-YADE (Xmatrix), PR215-100E (Manual)
Images: Lambda light chain mRNA staining of tonsil



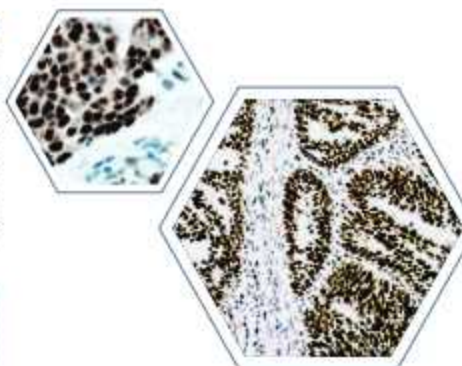
Oligo(dT)

Transport of mRNA from the nucleus to the cytoplasm is an essential process for gene expression in eukaryotic cells. *in situ* hybridization by oligo(dT) probe is a method of localizing and detecting poly(A), mRNA sequences to assess the preservation of mRNA in morphologically preserved formalin-fixed, paraffin embedded tissues sections or cell preparations.

Catalog No.: PR217-YADE (Xmatrix), PR217-100E (Manual)
Images: Preservation of oligo(dT) mRNA staining of colon cancer tissue

Retinoblastoma

The retinoblastoma tumor suppressor gene (RB1) encodes a protein of 110 kD that plays an important role in cell growth regulation. Hundreds of mutations in the RB1 gene have been identified and associated with retinoblastoma, a rare type of eye cancer that typically affects young children. Somatic mutations in the RB1 gene are also associated with bladder, breast, lung, bone and skin cancers. Altered expression of RB1 mRNA has also been associated with various cancer types.



Catalog No.: PR225-YADE (Xmatrix), PR225-100E (Manual)
Images: RB mRNA staining of adenocarcinoma tissue