Squamous Cell Carcinoma **Differentiation** of **Cervical Cancer** using New miRNA Biomarker Panel

Ready-to-Use fully optimized **SSNA** miRNA *in situ* hybridization (ISH) Kit

Cervical cancer is the second leading cause of cancer-related death globally. Human papillomavirus (HPV) infection is the major cause for almost all the cervical cancer cases. Early detection of cervical squamous cell carcinoma (SCC-Cx) and treatment is important in identifying cervical cancer before it enters advanced stages, however, due to non-specific symptoms and slow progression, diagnosis is often missed. Accumulating evidence has demonstrated that a considerable number of microRNAs (miRNAs) are aberrantly expressed in many cancer types, but information about miRNAs in cervical cancer remains scarce. Molecular profiling using Super Sensitive Nucleic Acid microRNA *in situ* hybridization (SSNA miRNA ISH) probes can help identify the best diagnostic and prognostic biomarker for cervical cancer.

Application:

BioGenex end-to-end miRNA solution including Xmatrx® automated systems and miRNA ISH Cervical Panel Probe was successfully used to differentiate moderately and poorly differentiated cancer tissues. Formalin-fixed paraffin-embedded (FFPE) tissue samples of cervical SCC and normal cervix biopsies were used for analysis. The hybridized fluorescein-labeled probes were developed as a colored precipitate. The *in situ* experimental conditions for hybridization were optimized for both manual and automated systems.

Read more about the study in the corresponding application note: 937-4105.0

BioGenex SSNA miRNA ISH Cervical Panel Probe

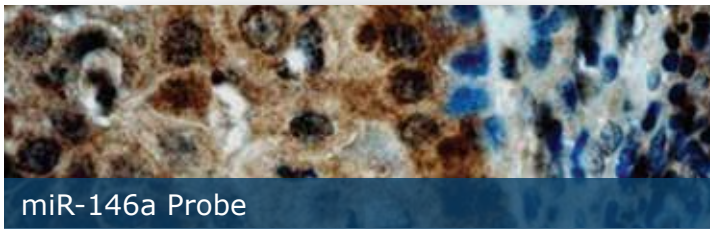
Target miRNA	**miR-146a**
Catalog no (25 test)	HM146A-100
Control slides (5 slides)	FB-HM146A

BioGenex miRNA Detection kit and Ancillary Reagents

Catalog	**Product name**
DF400-YADE	XISH™ One-Step Polymer-HRP ISH Detection Kit (Automation)
DF400-50KE	Super Sensitive One-Step Polymer-HRP ISH Detection Kit (Manual)

BioGenex proprietary **Super Sensitive Nucleic Acid (SSNA)** miRNA probes are specially designed for *in situ* hybridization of tissue samples. BioGenex miRNA probes have high melting temperatures (T_m) and are dual-end labeled. Together with BioGenex Super Sensitive Detection kits result in a clean and intense stain for localized visualization of key miRNA signal biomarkers.

Cervical ISH probes:



miR-146a Probe

miR-146a plays a mechanistic role of in endotoxin-induced differential cross-regulation of toll-like receptor signaling.

BioGenex Platforms for miRNA ISH Workflow:

Xmatrx® ELITE

Fully Automated System
for high throughput labs

NanoVIP® 300

Fully Automated System
for medium throughput labs

NanoVIP®

Fully Automated System
for medium throughput labs

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