Cholangiocarcinoma and **Pancreatic Ductal Adenocarcinoma** Differentiation by New miRNA Biomarker Panel

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

Pancreatic ductal adenocarcinoma (PDAC) and cholangiocarcinoma (CC) are two highly aggressive cancer types that arise from epithelial cells of the pancreatobiliary system. Owing to their overlapping immunohistochemical profiles and morphological similarity, they are virtually indistinguishable early in the course of the disease. Differential diagnosis between the two is vital in clinical settings, as they have important implications for better patient management with respect to surgical options, chemotherapy regimens and prognosis assessments. Current methods of profile-based strategies using tissue homogenates may not adequately identify differential expression between normal and abnormal tissue. Molecular differentiation using Super Sensitive Nucleic Acid microRNA *in situ* hybridization (SSNA miRNA ISH) probes can help identify the expression level and localize cell-specific miRNAs, leading to appropriate patient treatment.

Application:

BioGenex end-to-end miRNA solution including Xmatrx® automated systems and miRNA ISH Pancreatic Panel Probes were used to differentiate CC from PDAC. Study samples consisted of 13 cases of CCs, 18 cases of PDACs and primary human xenograft-isolated PDAC cell lines. Staining was evaluated semi-quantitatively by intensity and histoscore. 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: 937-4107.0

BioGenex SSNA miRNA ISH Probes for Differentiating Cholangiocarcinoma from Ductal Pancreatic Cancer

Target miRNA	miR-196a	miR-216a
Catalog no (25 test)	HM196A-100	HM216A-100
Control slides (5 slides)	FB-HM196A	FB-HM216A

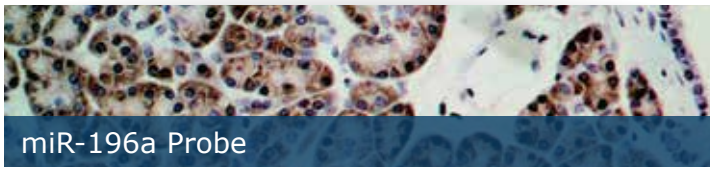
BioGenex miRNA Detection kit and Ancillary Reagents

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.

Pancreatic ISH probes:

miR-216a target PTEN, an inhibitor of Akt activation.



miR-196a suppresses the expression of specific homeobox genes that are imperative for the development of human embryos.

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

BioGenex
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Doc. No. 937-4108.0 Rev B