

Catalog No. AM100046

50 Reactions

To be used in conjunction with the Vantage™ microRNA Detection Kit, catalog number AM100091 (50 reactions) or AM100092 (200 reactions).

Components included in this kit:

Component	Amount
Pancreatic Cancer Panel 1 Bead Mix	400 µL

Handling Instructions

The kit is shipped on ice packs. Upon receipt, store all components at 2-8°C.

Related Products

Catalog Number

Vantage™ microRNA Detection Kit (50 reactions)	AM100091
Vantage™ microRNA Detection Kit (200 reactions).....	AM100092
Vantage™ Total RNA Purification Kit	NP100026
Vantage™ microRNA Purification Kit	NP100028
Vantage™ microRNA Labeling Kit.....	AM100044
Vantage™ Oncology Panel 1.....	AM100045
Vantage™ Breast Cancer Panel 1.....	AM100047
Vantage™ Ovarian Cancer Panel 1.....	AM100048
Vantage™ Cardiac Panel 1	AM100049
Vantage™ Diabetes Panel 1.....	AM100050
Vantage™ Hypoxia Panel 1.....	AM100051
Vantage™ Prostate Cancer Panel 1.....	AM100052
Vantage™ miR-Plex Control.....	AM100090

Sequences and Nomenclature

The sequences and nomenclature of the mature microRNAs were obtained from the [miRBase Sequence Database](#) version 14.0, released in September 2009. Names annotated with (*) indicate a mature microRNA sequence that originated from a stem-loop molecule that generated two mature microRNA sequences. In these cases, one mature sequence has a standard name while the other sequence from the same stem-loop has an annotated name (*).

xMAP® Bead Region	Human microRNA Nomenclature	Human microRNA mature sequence	Equivalent Mouse (Mus musculus)	Equivalent Rat (Rattus norvegicus)
5	hsa-miR-100	AACCCGUAGAUCCGAACUUGUG	mmu-miR-100	rno-miR-100
18	hsa-miR-16	UAGCAGCACGUAAAUAUUGGCG	mmu-miR-16	rno-miR-16
27	hsa-miR-21	UAGCUUAUCAGACUGAUGUUGA	mmu-miR-21	rno-miR-21
47	hsa-miR-221	AGCUACAUUGUCUGCUGGGUUUC	mmu-miR-221	rno-miR-221
50	hsa-miR-15b	UAGCAGCACAUCAUGGUUUACA	mmu-miR-15b	rno-miR-15b
53	hsa-let-7d	AGAGGUAGUAGGUUGCAUAGUU	mmu-let-7d	rno-let-7d
56	hsa-miR-181c	AACAUUCAACCGUCGGUGAGU	mmu-miR-181c	rno-miR-181c
62	hsa-miR-107	AGCAGCAUUGUACAGGGCUAUCA	mmu-miR-107	rno-miR-107
65	hsa-miR-23a/b	AUCACAUUGCCAGGGAUUUCC	mmu-miR-23a/b	rno-miR-23a/b
72	hsa-miR-155	UUA AUGCUAAUCGUGAUAGGGGU	NA	NA
75	hsa-miR-92a	UAUUGCACUUGUCCCGGCCUGU	mmu-miR-92a	rno-miR-92a
92	hsa-miR-181a	AACAUUCAACGCUGUCGGUGAGU	mmu-miR-181a	rno-miR-181a
49	5.8S Ribosomal RNA			

Performance Characteristics
I. Specificity

In separate reactions, 200 attomoles of synthetic biotinylated let-7a, miR-100, miR-155, miR-15b, miR-16, miR-181a, or miR-181c were detected with the *Vantage™* microRNA detection kit (Cat. No. AM100091). The assay was performed using the standard protocol. However, specificity necessary for distinguishing miR-181a and miR-181c was increased by increasing the wash temperature in Part II, Step A to 60°C.

microRNA Sequences		% Cross-Reactivity							
		let-7d	miR-100	miR-107	miR-155	miR-15b	miR-16	miR-181a	miR-181c
let-7d	AGAGGUAGUAGGUUGCAUAGUU	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
miR-100	AACCCGUAGAUCGGAACUUGUG	0.3%	100.0%	0.0%	1.1%	2.7%	0.1%	0.1%	0.0%
miR-107	AGCAGCAUUGUACAGGGCUAUC	0.0%	0.0%	100.0%	0.7%	0.0%	0.0%	0.0%	0.0%
miR-155	UUAAUGCUAAUCGUGAUAGGGGU	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
miR-15b	UAGCAGCACAUCAUGGUUACA	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
miR-16	UAGCAGCACGUAAAUAUUGGCG	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.5%	0.0%
miR-181a	AACAUUCAACG CUGUCGGUGAGU	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	8.3%
miR-181c	AACAUUCAAC-CUGUCGGUGAGU	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.1%	100.0%

II. Sensitivity – Limit of Detection (LOD) determined using synthetic microRNAs

Synthetic microRNAs were labeled using the *Vantage™* microRNA Labeling Kit (Cat. AM100044). A range of different concentrations of labeled microRNA was tested with the *Vantage* microRNA Detection Kit. The limit of detection was calculated using 2 x the mean of the negative control (blank).

Limit of Detection Range : 0.03-0.1 pg (5-15 attomoles)

III. Sensitivity LOD determined using total RNA from normal pancreatic tissue

Total RNA was extracted from normal pancreatic tissue. The total RNA was labeled using the *Vantage™* microRNA Labeling Kit (Cat. No. AM100044). A range of different concentrations of labeled microRNA was tested with the *Vantage™* microRNA Detection Kit and the *Vantage* microRNA Pancreatic Cancer Panel 1. The limit of detection was calculated using 2 x the mean of the negative control (blank).

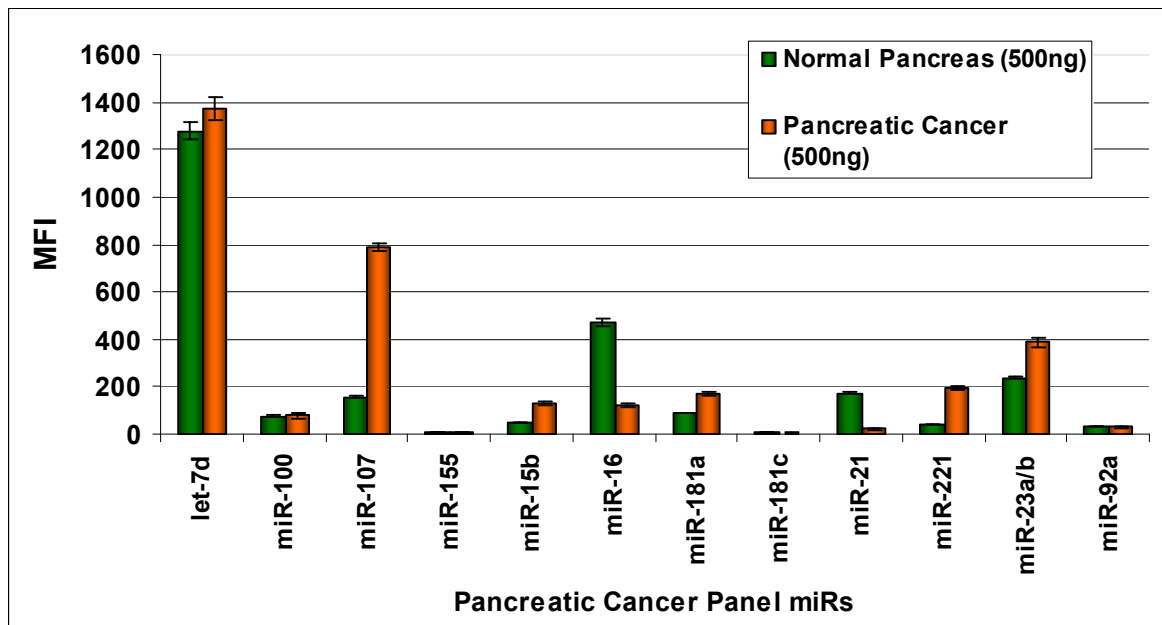
microRNA	Limit of Detection (ng Total RNA)
5.8S	1.5
let-7d	2.4
miR-100	56.4
miR-107	23.1
miR-155	329.5
miR-15b	39.3
miR-16	7.1

microRNA	Limit of Detection (ng Total RNA)
miR-181a	68.3
miR-181c	1460.1
miR-21	6.4
miR-221	16.4
miR-23a/b	13.1
miR-92a	not detected

The limit of detection of different microRNAs in tissues and cells is dependent upon expression levels. 5.8S ribosomal RNA is ubiquitously expressed in mammalian cells and tissues.

IV. MicroRNA profiles in normal versus pancreatic cancer

Total RNA was extracted from normal pancreas and pancreatic tumor tissue (unmatched). 500ng of total RNA from each extract was labeled using the Vantage™ microRNA Labeling Kit (Cat. No. AM100044) and then detected with the Vantage microRNA Detection Kit and the Vantage™ microRNA Pancreatic Cancer Panel 1. The signals from the 5.8S control were used to normalize the signal between the pancreatic tumor sample and the normal sample. The results below show that microRNAs are differentially expressed between normal and tumor samples.



miR-plex™ Control Panel (Catalog # AM100090)

The miR-Plex™ Control is a mix of seven biotinylated microRNAs that can be used as controls for the Vantage™ microRNA Detection Panels. The miR-plex™ Control Panel panel contains labeled microRNA comprising miR-1, miR-107, miR0126, miR-203, miR-21, miR-9, and 5.8S ribosomal RNA. When used in place of a labeled RNA sample, the following results should be obtained

Detection Panel	Cat. No.	miR-1	miR-107	miR-126	miR-203	miR-21	miR-9	5.8S
Pancreatic Cancer Panel 1	AM100046	Neg	Low	Neg	Neg	Medium	Neg	High

Terms and Conditions

By opening this Assay Product (which contains fluorescently labeled microsphere beads authorized by Luminex Corporation) or using this Assay Product in any manner, you are consenting to be bound by the following terms and conditions. You are also agreeing that the following terms and conditions constitute a legally valid and binding contract that is enforceable against you. If you do not agree to all of the terms and conditions set forth below, you must promptly return this Assay Product for a full refund prior to using it in any manner. You, the customer, acquire the right under Luminex Corporation's patent rights, if any, to use this Assay Product or any portion of this Assay Product, including without limitation the microsphere beads contained herein, only with Luminex Corporation's laser based fluorescent under the name Luminex Instrument.

Safety and Use Statement

All biological materials should be handled as potentially hazardous. Follow universal precautions as established by the Centers for Disease Control and Prevention and by the Occupational Safety and Health Administration when handling and disposing of potentially infectious or hazardous agents.

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