

RT² Profiler PCR Array (96-Well Format and 384-Well [4 x 96] Format)

Human miR-181 Targets

Cat. no. 330231 PAHS-6011ZA

For pathway expression analysis

Format	For use with the following real-time cyclers
RT ² Profiler PCR Array, Format A	Applied Biosystems® models 5700, 7000, 7300, 7500, 7700, 7900HT, ViiA™ 7 (96-well block); Bio-Rad® models iCycler®, iQ™ 5, MyiQ™, MyiQ2; Bio-Rad/MJ Research Chromo4™; Eppendorf® Mastercycler® ep realplex models 2, 2s, 4, 4s; Stratagene® models Mx3005P®, Mx3000P®; Takara TP-800
RT ² Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT ² Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
RT ² Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT ² Profiler PCR Array, Format F	Roche® LightCycler® 480 (96-well block)
RT ² Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT ² Profiler PCR Array, Format H	Fluidigm® BioMark™



Sample & Assay Technologies

Description

The Human miR-181 Targets RT² Profiler PCR Array profiles the expression of 84 hsa-miR-181a-5p target genes. This panel of 84 genes includes currently known experimentally verified plus bioinformatically predicted target genes regulated by hsa-miR-181a-5p. This array also includes target genes regulated by other miRNAs that have the same seed sequence as hsa-miR-181a-5p, including hsa-miR-181b-5p, hsa-miR-181c-5p, hsa-miR-181d, and hsa-miR-4262. miRNA target gene expression analysis provides further insight into the function of these specific miRNAs. A set of controls present on each array enables data analysis using the $\Delta\Delta\text{CT}$ method of relative quantification as well as assessment of reverse transcription performance, genomic DNA contamination, and PCR performance. Using real-time PCR, research studies can easily and reliably analyze the expression of a focused panel of genes likely to be regulated by miR-181 with this array.

For further details, consult the *RT² Profiler PCR Array Handbook*.

Shipping and storage

RT² Profiler PCR Arrays in formats A, C, D, E, F, and G are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products. RT² Profiler PCR Arrays in format H are shipped on dry ice or blue ice packs.

For long term storage, keep plates at -20°C .

Note: Ensure that you have the correct RT² Profiler PCR Array format for your real-time cycler (see table above).

Note: Open the package and store the products appropriately immediately on receipt.

Array layout (96-well)

For 384-well 4 x 96 PCR arrays, genes are present in a staggered format. Refer to the *RT² Profiler PCR Array Handbook* for layout.

	1	2	3	4	5	6	7	8	9	10	11	12
A	ACVR2A	ADARB1	ADCY1	AICDA	ATG5	ATM	BCL2	BCL2L11	BDNF	BMPR2	C16orf87	C6orf62
B	CAPRIN2	CASP3	CBLB	CBX7	CD69	CDKN1B	CDX2	COPS2	CXCR3	CYLD	DDIT4	DISC1
C	DOCK4	DUSP5	DUSP6	EIF4A2	ENKUR	ETV6	FBXL3	FKBP1A	FOS	GABRA1	GATA6	GLS
D	GRIA1	GRIA2	GRIK1	HIPK2	HK2	HMGB2	IGF1R	IL1A	KANK1	KAT2B	KCNA4	KIAA0195
E	KLHL2	KRAS	LRBA	MAP1B	MAP3K10	MGMT	NARF	NLK	NMT2	NOTCH4	NPEPPS	PLAG1
F	PLAU	PLCL2	PRKCD	PROX1	PTPN11	PTPN22	RALA	RLF	RNF2	SIRT1	SLC2A1	STAT1
G	TANC2	TBPL1	TCERG1	TCL1A	TMEM131	VSNL1	YTHDC1	ZFP36L1	ZFP36L2	ZNF180	ZNF37A	ZNF83
H	ACTB	B2M	GAPDH	HRPT1	RPLP0	HGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Hs.470174	NM_001616	ACVR2A	Activin A receptor, type IIA
A02	Hs.474018	NM_001112	ADARB1	Adenosine deaminase, RNA-specific, B1
A03	Hs.192215	NM_021116	ADCY1	Adenylate cyclase 1 (brain)
A04	Hs.149342	NM_020661	AICDA	Activation-induced cytidine deaminase
A05	Hs.486063	NM_004849	ATG5	ATG5 autophagy related 5 homolog (S. cerevisiae)
A06	Hs.367437	NM_000051	ATM	Ataxia telangiectasia mutated
A07	Hs.150749	NM_000633	BCL2	B-cell CLL/lymphoma 2
A08	Hs.469658	NM_006538	BCL2L11	BCL2-like 11 (apoptosis facilitator)
A09	Hs.502182	NM_001709	BDNF	Brain-derived neurotrophic factor
A10	Hs.471119	NM_001204	BMPR2	Bone morphogenetic protein receptor, type II (serine/threonine kinase)
A11	Hs.406551	NM_001001436	C16orf87	Chromosome 16 open reading frame 87
A12	Hs.519930	NM_030939	C6orf62	Chromosome 6 open reading frame 62
B01	Hs.234355	NM_023925	CAPRIN2	Caprin family member 2
B02	Hs.141125	NM_004346	CASP3	Caspase 3, apoptosis-related cysteine peptidase
B03	Hs.430589	NM_170662	CBLB	Cas-Br-M (murine) ecotropic retroviral transforming sequence b
B04	Hs.356416	NM_175709	CBX7	Chromobox homolog 7
B05	Hs.208854	NM_001781	CD69	CD69 molecule
B06	Hs.238990	NM_004064	CDKN1B	Cyclin-dependent kinase inhibitor 1B (p27, Kip1)
B07	Hs.174249	NM_001265	CDX2	Caudal type homeobox 2
B08	Hs.369614	NM_004236	COPS2	COP9 constitutive photomorphogenic homolog subunit 2 (Arabidopsis)
B09	Hs.198252	NM_001504	CXCR3	Chemokine (C-X-C motif) receptor 3
B10	Hs.578973	NM_015247	CYLD	Cylindromatosis (turban tumor syndrome)
B11	Hs.523012	NM_019058	DDIT4	DNA-damage-inducible transcript 4
B12	Hs.13318	NM_018662	DISC1	Disrupted in schizophrenia 1
C01	Hs.654652	NM_014705	DOCK4	Dedicator of cytokinesis 4
C02	Hs.2128	NM_004419	DUSP5	Dual specificity phosphatase 5
C03	Hs.298654	NM_001946	DUSP6	Dual specificity phosphatase 6
C04	Hs.599481	NM_001967	EIF4A2	Eukaryotic translation initiation factor 4A2
C05	Hs.534486	NM_145010	ENKUR	Enkurin, TRPC channel interacting protein
C06	Hs.504765	NM_001987	ETV6	Ets variant 6
C07	Hs.508284	NM_012158	FBXL3	F-box and leucine-rich repeat protein 3
C08	Hs.471933	NM_000801	FKBP1A	FK506 binding protein 1A, 12kDa
C09	Hs.728789	NM_005252	FOS	FBJ murine osteosarcoma viral oncogene homolog
C10	Hs.175934	NM_000806	GABRA1	Gamma-aminobutyric acid (GABA) A receptor, alpha 1
C11	Hs.514746	NM_005257	GATA6	GATA binding protein 6
C12	Hs.116448	NM_014905	GLS	Glutaminase
D01	Hs.519693	NM_000827	GRIA1	Glutamate receptor, ionotropic, AMPA 1
D02	Hs.32763	NM_000826	GRIA2	Glutamate receptor, ionotropic, AMPA 2
D03	Hs.706747	NM_000830	GRIK1	Glutamate receptor, ionotropic, kainate 1
D04	Hs.729705	NM_022740	HIPK2	Homeodomain interacting protein kinase 2
D05	Hs.406266	NM_000189	HK2	Hexokinase 2
D06	Hs.434953	NM_002129	HMGB2	High mobility group box 2
D07	Hs.643120	NM_000875	IGF1R	Insulin-like growth factor 1 receptor
D08	Hs.1722	NM_000575	IL1A	Interleukin 1, alpha
D09	Hs.306764	NM_153186	KANK1	KN motif and ankyrin repeat domains 1

Position	UniGene	GenBank	Symbol	Description
D10	Hs.533055	NM_003884	KAT2B	K(lysine) acetyltransferase 2B
D11	Hs.592002	NM_002233	KCNA4	Potassium voltage-gated channel, shaker-related subfamily, member 4
D12	Hs.514474	NM_014738	KIAA0195	KIAA0195
E01	Hs.388668	NM_007246	KLHL2	Kelch-like 2, Mayven (Drosophila)
E02	Hs.505033	NM_004985	KRAS	V-Ki-ras2 Kirsten rat sarcoma viral oncogene homolog
E03	Hs.480938	NM_006726	LRBA	LPS-responsive vesicle trafficking, beach and anchor containing
E04	Hs.335079	NM_005909	MAP1B	Microtubule-associated protein 1B
E05	Hs.466743	NM_002446	MAP3K10	Mitogen-activated protein kinase kinase kinase 10
E06	Hs.501522	NM_002412	MGMT	O-6-methylguanine-DNA methyltransferase
E07	Hs.256526	NM_012336	NARF	Nuclear prelamin A recognition factor
E08	Hs.208759	NM_016231	NLK	Nemo-like kinase
E09	Hs.60339	NM_004808	NMT2	N-myristoyltransferase 2
E10	Hs.436100	NM_004557	NOTCH4	Notch 4
E11	Hs.443837	NM_006310	NPEPPS	Aminopeptidase puromycin sensitive
E12	Hs.14968	NM_002655	PLAG1	Pleiomorphic adenoma gene 1
F01	Hs.77274	NM_002658	PLAU	Plasminogen activator, urokinase
F02	Hs.202010	NM_015184	PLCL2	Phospholipase C-like 2
F03	Hs.155342	NM_006254	PRKCD	Protein kinase C, delta
F04	Hs.585369	NM_002763	PROX1	Prospero homeobox 1
F05	Hs.506852	NM_002834	PTPN11	Protein tyrosine phosphatase, non-receptor type 11
F06	Hs.535276	NM_012411	PTPN22	Protein tyrosine phosphatase, non-receptor type 22 (lymphoid)
F07	Hs.6906	NM_005402	RALA	V-ral simian leukemia viral oncogene homolog A (ras related)
F08	Hs.205627	NM_012421	RLF	Rearranged L-myc fusion
F09	Hs.591490	NM_007212	RNF2	Ring finger protein 2
F10	Hs.369779	NM_012238	SIRT1	Sirtuin 1
F11	Hs.473721	NM_006516	SLC2A1	Solute carrier family 2 (facilitated glucose transporter), member 1
F12	Hs.642990	NM_007315	STAT1	Signal transducer and activator of transcription 1, 91kDa
G01	Hs.410889	NM_025185	TANC2	Tetratricopeptide repeat, ankyrin repeat and coiled-coil containing 2
G02	Hs.486507	NM_004865	TBPL1	TBP-like 1
G03	Hs.443465	NM_006706	TCERG1	Transcription elongation regulator 1
G04	Hs.2484	NM_021966	TCL1A	T-cell leukemia/lymphoma 1A
G05	Hs.469376	NM_015348	TMEM131	Transmembrane protein 131
G06	Hs.444212	NM_003385	VSNL1	Visinin-like 1
G07	Hs.175955	NM_133370	YTHDC1	YTH domain containing 1
G08	Hs.85155	NM_004926	ZFP36L1	Zinc finger protein 36, C3H type-like 1
G09	Hs.503093	NM_006887	ZFP36L2	Zinc finger protein 36, C3H type-like 2
G10	Hs.22305	NM_013256	ZNF180	Zinc finger protein 180
G11	Hs.292575	NM_001007094	ZNF37A	Zinc finger protein 37A
G12	Hs.467210	NM_018300	ZNF83	Zinc finger protein 83
H01	Hs.520640	NM_001101	ACTB	Actin, beta
H02	Hs.534255	NM_004048	B2M	Beta-2-microglobulin
H03	Hs.592355	NM_002046	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
H04	Hs.412707	NM_000194	HPRT1	Hypoxanthine phosphoribosyltransferase 1
H05	Hs.546285	NM_001002	RPLP0	Ribosomal protein, large, P0
H06	N/A	SA_00105	HGDC	Human Genomic DNA Contamination
H07	N/A	SA_00104	RTC	Reverse Transcription Control
H08	N/A	SA_00104	RTC	Reverse Transcription Control
H09	N/A	SA_00104	RTC	Reverse Transcription Control
H10	N/A	SA_00103	PPC	Positive PCR Control
H11	N/A	SA_00103	PPC	Positive PCR Control
H12	N/A	SA_00103	PPC	Positive PCR Control

Related products

For optimal performance, RT² Profiler PCR Arrays should be used together with the RT² First Strand Kit for cDNA synthesis and RT² SYBR[®] Green qPCR Mastermixes for PCR.

Product	Contents	Cat. no.
RT ² First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT ² SYBR Green qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with real-time cyclers that do not require a reference dye, including: Bio-Rad models CFX96, CFX384, DNA Engine Opticon 2; Bio-Rad/MJ Research Chromo4; Roche LightCycler 480 (96-well and 384-well); all other cyclers	330500
RT ² SYBR Green ROX™ qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the following real-time cyclers: Applied Biosystems models 5700, 7000, 7300, 7500 [Standard and FAST], 7700, 7900HT 96-well block [Standard and FAST] and 384-well block, StepOnePlus; Eppendorf Mastercycler ep realplex models 2, 2S, 4, 4S; Stratagene models Mx3000P, Mx3005P, Mx4000; Takara TP-800	330520
RT ² SYBR Green Fluor qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the following real-time cyclers: Bio-Rad models iCycler, iQ5, MyiQ, MyiQ2	330510

* Larger kit sizes available; please inquire.

RT² Profiler PCR Array products are intended for molecular biology applications. These products are not intended for the diagnosis, prevention, or treatment of a disease.

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