

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

Human Insulin Signaling Pathway

Cat. no. 330231 PAHS-030ZA

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 Insulin Signaling Pathway RT² Profiler PCR Array profiles the expression of 84 genes related to insulin-responsive genes. This array represents genes associated with the insulin receptor and target genes for insulin signaling. Genes involved in the metabolism of carbohydrates, lipids, and proteins and other related biological responses are also included. This array contains members of the PI3K and MAPK Pathways as well. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to insulin-responsive 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	ACACA	ACOX1	ADRB3	AEBP1	AKT1	AKT2	AKT3	ANG	ARAF	BCL2L1	BRAF	CAP1
B	CBL	CEBPA	CEBPB	DOK1	DOK2	DOK3	DUSP14	EIF2B1	EIF4EBP1	ERCC1	FASN	FBP1
C	FOS	FRS2	FRS3	G6PC	GAB1	GCK	GPD1	GRB2	GSK3A	GSK3B	HK2	HRAS
D	IGF1R	IGF2	IGFBP1	INS	INSL3	INSR	IRS1	IRS2	IRS4	JUN	KRAS	LDLR
E	LEP	MAP2K1	MAPK1	MTOR	NCK1	NOS2	NPY	PCK2	PDPK1	PIK3CA	PIK3R1	PIK3R2
F	PKM2	PPARG	PPP1CA	PRKCG	PRKCI	PRKCZ	PRL	PTPN1	PTPRF	RAF1	RETN	RPS6KA1
G	RRAS	RRAS2	SERPINE1	SHC1	SLC2A1	SLC2A4	SORBS1	SOS1	SREBF1	TG	UCP1	VEGFA
H	ACTB	B2M	GAPDH	HPRT1	RPLP0	HGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Hs.160556	NM_198834	ACACA	Acetyl-CoA carboxylase alpha
A02	Hs.464137	NM_004035	ACOX1	Acyl-CoA oxidase 1, palmitoyl
A03	Hs.2549	NM_000025	ADRB3	Adrenergic, beta-3-, receptor
A04	Hs.439463	NM_001129	AEBP1	AE binding protein 1
A05	Hs.525622	NM_005163	AKT1	V-akt murine thymoma viral oncogene homolog 1
A06	Hs.631535	NM_001626	AKT2	V-akt murine thymoma viral oncogene homolog 2
A07	Hs.498292	NM_005465	AKT3	V-akt murine thymoma viral oncogene homolog 3 (protein kinase B, gamma)
A08	Hs.283749	NM_001145	ANG	Angiogenin, ribonuclease, RNase A family, 5
A09	Hs.446641	NM_001654	ARAF	V-raf murine sarcoma 3611 viral oncogene homolog
A10	Hs.516966	NM_138578	BCL2L1	BCL2-like 1
A11	Hs.550061	NM_004333	BRAF	V-raf murine sarcoma viral oncogene homolog B1
A12	Hs.370581	NM_006367	CAP1	CAP, adenylate cyclase-associated protein 1 (yeast)
B01	Hs.504096	NM_005188	CBL	Cas-Br-M (murine) ecotropic retroviral transforming sequence
B02	Hs.699463	NM_004364	CEBPA	CCAAT/enhancer binding protein (C/EBP), alpha
B03	Hs.517106	NM_005194	CEBPB	CCAAT/enhancer binding protein (C/EBP), beta
B04	Hs.103854	NM_001381	DOK1	Docking protein 1, 62kDa (downstream of tyrosine kinase 1)
B05	Hs.71215	NM_003974	DOK2	Docking protein 2, 56kDa
B06	Hs.153343	NM_024872	DOK3	Docking protein 3
B07	Hs.91448	NM_007026	DUSP14	Dual specificity phosphatase 14
B08	Hs.728874	NM_001414	EIF2B1	Eukaryotic translation initiation factor 2B, subunit 1 alpha, 26kDa
B09	Hs.411641	NM_004095	EIF4EBP1	Eukaryotic translation initiation factor 4E binding protein 1
B10	Hs.435981	NM_001983	ERCC1	Excision repair cross-complementing rodent repair deficiency, complementation group 1 (includes overlapping antisense sequence)
B11	Hs.83190	NM_004104	FASN	Fatty acid synthase
B12	Hs.494496	NM_000507	FBP1	Fructose-1,6-bisphosphatase 1
C01	Hs.728789	NM_005252	FOS	FBJ murine osteosarcoma viral oncogene homolog
C02	Hs.593446	NM_006654	FRS2	Fibroblast growth factor receptor substrate 2
C03	Hs.194208	NM_006653	FRS3	Fibroblast growth factor receptor substrate 3
C04	Hs.212293	NM_000151	G6PC	Glucose-6-phosphatase, catalytic subunit
C05	Hs.80720	NM_002039	GAB1	GRB2-associated binding protein 1
C06	Hs.1270	NM_000162	GCK	Glucokinase (hexokinase 4)
C07	Hs.524418	NM_005276	GPD1	Glycerol-3-phosphate dehydrogenase 1 (soluble)
C08	Hs.444356	NM_002086	GRB2	Growth factor receptor-bound protein 2
C09	Hs.466828	NM_019884	GSK3A	Glycogen synthase kinase 3 alpha
C10	Hs.445733	NM_002093	GSK3B	Glycogen synthase kinase 3 beta
C11	Hs.406266	NM_000189	HK2	Hexokinase 2
C12	Hs.37003	NM_005343	HRAS	V-Ha-ras Harvey rat sarcoma viral oncogene homolog
D01	Hs.643120	NM_000875	IGF1R	Insulin-like growth factor 1 receptor
D02	Hs.523414	NM_000612	IGF2	Insulin-like growth factor 2 (somatomedin A)
D03	Hs.642938	NM_000596	IGFBP1	Insulin-like growth factor binding protein 1
D04	Hs.654579	NM_000207	INS	Insulin
D05	Hs.37062	NM_005543	INSL3	Insulin-like 3 (Leydig cell)
D06	Hs.465744	NM_000208	INSR	Insulin receptor
D07	Hs.471508	NM_005544	IRS1	Insulin receptor substrate 1
D08	Hs.442344	NM_003749	IRS2	Insulin receptor substrate 2

Position	UniGene	GenBank	Symbol	Description
D09	Hs.592215	NM_003604	IRS4	Insulin receptor substrate 4
D10	Hs.714791	NM_002228	JUN	Jun proto-oncogene
D11	Hs.505033	NM_004985	KRAS	V-Ki-ras2 Kirsten rat sarcoma viral oncogene homolog
D12	Hs.213289	NM_000527	LDLR	Low density lipoprotein receptor
E01	Hs.194236	NM_000230	LEP	Leptin
E02	Hs.145442	NM_002755	MAP2K1	Mitogen-activated protein kinase kinase 1
E03	Hs.431850	NM_002745	MAPK1	Mitogen-activated protein kinase 1
E04	Hs.338207	NM_004958	MTOR	Mechanistic target of rapamycin (serine/threonine kinase)
E05	Hs.477693	NM_006153	NCK1	NCK adaptor protein 1
E06	Hs.709191	NM_000625	NOS2	Nitric oxide synthase 2, inducible
E07	Hs.1832	NM_000905	NPY	Neuropeptide Y
E08	Hs.75812	NM_004563	PCK2	Phosphoenolpyruvate carboxykinase 2 (mitochondrial)
E09	Hs.459691	NM_002613	PDPK1	3-phosphoinositide dependent protein kinase-1
E10	Hs.553498	NM_006218	PIK3CA	Phosphoinositide-3-kinase, catalytic, alpha polypeptide
E11	Hs.132225	NM_181504	PIK3R1	Phosphoinositide-3-kinase, regulatory subunit 1 (alpha)
E12	Hs.371344	NM_005027	PIK3R2	Phosphoinositide-3-kinase, regulatory subunit 2 (beta)
F01	Hs.534770	NM_002654	PKM2	Pyruvate kinase, muscle
F02	Hs.162646	NM_015869	PPARG	Peroxisome proliferator-activated receptor gamma
F03	Hs.183994	NM_002708	PPP1CA	Protein phosphatase 1, catalytic subunit, alpha isozyme
F04	Hs.631564	NM_002739	PRKCG	Protein kinase C, gamma
F05	Hs.478199	NM_002740	PRKCI	Protein kinase C, iota
F06	Hs.496255	NM_002744	PRKCZ	Protein kinase C, zeta
F07	Hs.1905	NM_000948	PRL	Prolactin
F08	Hs.417549	NM_002827	PTPN1	Protein tyrosine phosphatase, non-receptor type 1
F09	Hs.272062	NM_002840	PTPRF	Protein tyrosine phosphatase, receptor type, F
F10	Hs.159130	NM_002880	RAF1	V-raf-1 murine leukemia viral oncogene homolog 1
F11	Hs.283091	NM_020415	RETN	Resistin
F12	Hs.149957	NM_002953	RPS6KA1	Ribosomal protein S6 kinase, 90kDa, polypeptide 1
G01	Hs.515536	NM_006270	RRAS	Related RAS viral (r-ras) oncogene homolog
G02	Hs.502004	NM_012250	RRAS2	Related RAS viral (r-ras) oncogene homolog 2
G03	Hs.414795	NM_000602	SERPINE1	Serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1
G04	Hs.433795	NM_003029	SHC1	SHC (Src homology 2 domain containing) transforming protein 1
G05	Hs.473721	NM_006516	SLC2A1	Solute carrier family 2 (facilitated glucose transporter), member 1
G06	Hs.380691	NM_001042	SLC2A4	Solute carrier family 2 (facilitated glucose transporter), member 4
G07	Hs.38621	NM_006434	SORBS1	Sorbin and SH3 domain containing 1
G08	Hs.592839	NM_005633	SOS1	Son of sevenless homolog 1 (Drosophila)
G09	Hs.592123	NM_004176	SREBF1	Sterol regulatory element binding transcription factor 1
G10	Hs.654591	NM_003235	TG	Thyroglobulin
G11	Hs.249211	NM_021833	UCP1	Uncoupling protein 1 (mitochondrial, proton carrier)
G12	Hs.73793	NM_003376	VEGFA	Vascular endothelial growth factor A
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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