

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

Human Lipoprotein Signaling & Cholesterol Metabolism

Cat. no. 330231 PAHS-080ZA

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™



Description

The Human Lipoprotein Signaling and Cholesterol Metabolism RT² Profiler PCR Array profiles the expression of 84 key genes involved in lipoprotein transport and cholesterol metabolism. Lipoproteins primarily transport structural and nutritional lipids throughout the organism. Two commonly known lipoproteins are the Low Density Lipoproteins (LDL) and the High Density Lipoproteins (HDL). LDL carries cholesterol from the liver to all other cells of the body. HDL collects cholesterol from the body's tissues, and brings it back to the liver. Therefore, sometimes LDL is referred to as "bad cholesterol", while HDL is referred to as "good cholesterol". The array includes LDL and HDL receptors as well as their associated proteins. The array also includes key genes involved in cholesterol metabolism. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to lipoprotein signaling and cholesterol metabolism 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	ABCA1	ABCG1	ACAA2	AKR1D1	ANGPTL3	ANKRA2	APOA1	APOA2	APOA4	APOB	APOC3	APOD
B	APOE	APOF	APOL1	APOL2	APOL5	CDH13	CEL	CELA3A	CELA3B	CETP	CNBP	COLEC12
C	CXCL16	CYB5R3	CYP11A1	CYP39A1	CYP46A1	CYP51A1	CYP7A1	CYP7B1	DHCR24	DHCR7	FDFT1	FDP5
D	HDLBP	HMGCR	HMGCS1	HMGCS2	IDI1	IDI2	IL4	INSIG1	INSIG2	LCAT	LDLR	LDLRAP1
E	LEP	LIPE	LRP10	LRP12	LRP1B	LRP6	LRPAP1	MBTPS1	MVD	MVK	NPC1L1	NROB2
F	NR1H4	NSDHL	OLR1	OSBPL1A	OSBPL5	PCSK9	PMVK	PPARD	PRKAA1	PRKAA2	PRKAG2	SCAP
G	SCARF1	SNX17	SOAT1	SORL1	SREBF1	SREBF2	STAB1	STAB2	STARD3	TM7SF2	TRERF1	VLDLR
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.429294	NM_005502	ABCA1	ATP-binding cassette, sub-family A (ABC1), member 1
A02	Hs.124649	NM_004915	ABCG1	ATP-binding cassette, sub-family G (WHITE), member 1
A03	Hs.200136	NM_006111	ACAA2	Acetyl-CoA acyltransferase 2
A04	Hs.201667	NM_005989	AKR1D1	Aldo-keto reductase family 1, member D1 (delta 4-3-ketosteroid-5-beta-reductase)
A05	Hs.209153	NM_014495	ANGPTL3	Angiopoietin-like 3
A06	Hs.239154	NM_023039	ANKRA2	Ankyrin repeat, family A (RFXANK-like), 2
A07	Hs.633003	NM_000039	APOA1	Apolipoprotein A-I
A08	Hs.237658	NM_001643	APOA2	Apolipoprotein A-II
A09	Hs.591940	NM_000482	APOA4	Apolipoprotein A-IV
A10	Hs.120759	NM_000384	APOB	Apolipoprotein B (including Ag(x) antigen)
A11	Hs.73849	NM_000040	APOC3	Apolipoprotein C-III
A12	Hs.522555	NM_001647	APOD	Apolipoprotein D
B01	Hs.654439	NM_000041	APOE	Apolipoprotein E
B02	Hs.534302	NM_001638	APOF	Apolipoprotein F
B03	Hs.114309	NM_003661	APOL1	Apolipoprotein L, 1
B04	Hs.474740	NM_030882	APOL2	Apolipoprotein L, 2
B05	Hs.326561	NM_030642	APOL5	Apolipoprotein L, 5
B06	Hs.654386	NM_001257	CDH13	Cadherin 13, H-cadherin (heart)
B07	Hs.533258	NM_001807	CEL	Carboxyl ester lipase (bile salt-stimulated lipase)
B08	Hs.654349	NM_005747	CELA3A	Chymotrypsin-like elastase family, member 3A
B09	Hs.728752	NM_007352	CELA3B	Chymotrypsin-like elastase family, member 3B
B10	Hs.89538	NM_000078	CETP	Cholesteryl ester transfer protein, plasma
B11	Hs.518249	NM_003418	CNBP	CCHC-type zinc finger, nucleic acid binding protein
B12	Hs.464422	NM_130386	COLEC12	Collectin sub-family member 12
C01	Hs.708201	NM_022059	CXCL16	Chemokine (C-X-C motif) ligand 16
C02	Hs.700572	NM_007326	CYB5R3	Cytochrome b5 reductase 3
C03	Hs.303980	NM_000781	CYP11A1	Cytochrome P450, family 11, subfamily A, polypeptide 1
C04	Hs.387367	NM_016593	CYP39A1	Cytochrome P450, family 39, subfamily A, polypeptide 1
C05	Hs.25121	NM_006668	CYP46A1	Cytochrome P450, family 46, subfamily A, polypeptide 1
C06	Hs.417077	NM_000786	CYP51A1	Cytochrome P450, family 51, subfamily A, polypeptide 1
C07	Hs.1644	NM_000780	CYP7A1	Cytochrome P450, family 7, subfamily A, polypeptide 1
C08	Hs.667720	NM_004820	CYP7B1	Cytochrome P450, family 7, subfamily B, polypeptide 1
C09	Hs.498727	NM_014762	DHCR24	24-dehydrocholesterol reductase
C10	Hs.503134	NM_001360	DHCR7	7-dehydrocholesterol reductase
C11	Hs.593928	NM_004462	FDFT1	Farnesyl-diphosphate farnesyltransferase 1
C12	Hs.335918	NM_002004	FDPS	Farnesyl diphosphate synthase
D01	Hs.471851	NM_005336	HDLBP	High density lipoprotein binding protein
D02	Hs.643495	NM_000859	HMGCR	3-hydroxy-3-methylglutaryl-CoA reductase
D03	Hs.397729	NM_002130	HMGCS1	3-hydroxy-3-methylglutaryl-CoA synthase 1 (soluble)
D04	Hs.59889	NM_005518	HMGCS2	3-hydroxy-3-methylglutaryl-CoA synthase 2 (mitochondrial)
D05	Hs.283652	NM_004508	IDI1	Isopentenyl-diphosphate delta isomerase 1
D06	Hs.9270	NM_033261	IDI2	Isopentenyl-diphosphate delta isomerase 2
D07	Hs.73917	NM_000589	IL4	Interleukin 4
D08	Hs.520819	NM_005542	INSIG1	Insulin induced gene 1

Position	UniGene	GenBank	Symbol	Description
D09	Hs.7089	NM_016133	INSIG2	Insulin induced gene 2
D10	Hs.387239	NM_000229	LCAT	Lecithin-cholesterol acyltransferase
D11	Hs.213289	NM_000527	LDLR	Low density lipoprotein receptor
D12	Hs.590911	NM_015627	LDLRAP1	Low density lipoprotein receptor adaptor protein 1
E01	Hs.194236	NM_000230	LEP	Leptin
E02	Hs.656980	NM_005357	LIPE	Lipase, hormone-sensitive
E03	Hs.525232	NM_014045	LRP10	Low density lipoprotein receptor-related protein 10
E04	Hs.600630	NM_013437	LRP12	Low density lipoprotein receptor-related protein 12
E05	Hs.656461	NM_018557	LRP1B	Low density lipoprotein receptor-related protein 1B
E06	Hs.584775	NM_002336	LRP6	Low density lipoprotein receptor-related protein 6
E07	Hs.533136	NM_002337	LRPAP1	Low density lipoprotein receptor-related protein associated protein 1
E08	Hs.75890	NM_003791	MBTPS1	Membrane-bound transcription factor peptidase, site 1
E09	Hs.252457	NM_002461	MVD	Mevalonate (diphospho) decarboxylase
E10	Hs.130607	NM_000431	MVK	Mevalonate kinase
E11	Hs.567486	NM_013389	NPC1L1	NPC1 (Niemann-Pick disease, type C1, gene)-like 1
E12	Hs.427055	NM_021969	NROB2	Nuclear receptor subfamily 0, group B, member 2
F01	Hs.282735	NM_005123	NR1H4	Nuclear receptor subfamily 1, group H, member 4
F02	Hs.57698	NM_015922	NSDHL	NAD(P) dependent steroid dehydrogenase-like
F03	Hs.412484	NM_002543	OLR1	Oxidized low density lipoprotein (lectin-like) receptor 1
F04	Hs.370725	NM_018030	OSBPL1A	Oxysterol binding protein-like 1A
F05	Hs.436166	NM_020896	OSBPL5	Oxysterol binding protein-like 5
F06	Hs.18844	NM_174936	PCSK9	Proprotein convertase subtilisin/kexin type 9
F07	Hs.30954	NM_006556	PMVK	Phosphomevalonate kinase
F08	Hs.696032	NM_006238	PPARD	Peroxisome proliferator-activated receptor delta
F09	Hs.43322	NM_006251	PRKAA1	Protein kinase, AMP-activated, alpha 1 catalytic subunit
F10	Hs.437039	NM_006252	PRKAA2	Protein kinase, AMP-activated, alpha 2 catalytic subunit
F11	Hs.647072	NM_016203	PRKAG2	Protein kinase, AMP-activated, gamma 2 non-catalytic subunit
F12	Hs.531789	NM_012235	SCAP	SREBF chaperone
G01	Hs.647430	NM_003693	SCARF1	Scavenger receptor class F, member 1
G02	Hs.278569	NM_014748	SNX17	Sorting nexin 17
G03	Hs.496383	NM_003101	SOAT1	Sterol O-acyltransferase 1
G04	Hs.368592	NM_003105	SORL1	Sortilin-related receptor, L(DLR class) A repeats containing
G05	Hs.592123	NM_004176	SREBF1	Sterol regulatory element binding transcription factor 1
G06	Hs.443258	NM_004599	SREBF2	Sterol regulatory element binding transcription factor 2
G07	Hs.301989	NM_015136	STAB1	Stabilin 1
G08	Hs.408249	NM_017564	STAB2	Stabilin 2
G09	Hs.728838	NM_006804	STARD3	STAR-related lipid transfer (START) domain containing 3
G10	Hs.31130	NM_003273	TM7SF2	Transmembrane 7 superfamily member 2
G11	Hs.485392	NM_033502	TRETF1	Transcriptional regulating factor 1
G12	Hs.370422	NM_003383	VLDLR	Very low density lipoprotein receptor
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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