

# RT<sup>2</sup> Profiler PCR Array (96-Well Format and 384-Well [4 x 96] Format)

## Mouse Lipoprotein Signaling & Cholesterol Metabolism

Cat. no. 330231 PAMM-080ZA

For pathway expression analysis

Format	For use with the following real-time cyclers
RT <sup>2</sup> 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 <sup>2</sup> Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT <sup>2</sup> Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
RT <sup>2</sup> Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT <sup>2</sup> Profiler PCR Array, Format F	Roche® LightCycler® 480 (96-well block)
RT <sup>2</sup> Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT <sup>2</sup> Profiler PCR Array, Format H	Fluidigm® BioMark™



Sample & Assay Technologies

## Description

The Mouse Lipoprotein Signaling and Cholesterol Metabolism RT<sup>2</sup> 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 *RT<sup>2</sup> Profiler PCR Array Handbook*.

## Shipping and storage

RT<sup>2</sup> 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. RT<sup>2</sup> 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 RT<sup>2</sup> Profiler PCR Array format for your real-time cycler (see table above).

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

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## Array layout (96-well)

For 384-well 4 x 96 PCR arrays, genes are present in a staggered format. Refer to the *RT<sup>2</sup> Profiler PCR Array Handbook* for layout.

	1	2	3	4	5	6	7	8	9	10	11	12
<b>A</b>	Abca1	Abca2	Abcg1	Acaa2	Akr1d1	Angptl3	Ankra2	Apoa1	Apoa2	Apoa4	Apob	Apoc3
<b>B</b>	Apod	ApoE	Apof	Apol8	Cdh13	Cel	Cela3b	Cnbp	Colec12	Crp	Cxcl16	Cyb5r3
<b>C</b>	Cyp11a1	Cyp39a1	Cyp46a1	Cyp51	Cyp7a1	Cyp7b1	Dhcr24	Dhcr7	Ebp	Fdft1	Fdps	Hdlbp
<b>D</b>	Hmgcr	Hmgcs1	Hmgcs2	Idi1	Idi2	Il4	Insig1	Insig2	Lcat	Ldlr	Ldlrap1	Lep
<b>E</b>	Lipe	Lrp10	Lrp12	Lrp1b	Lrp6	Lrpap1	Mbtps1	Mvd	Mvk	Npc111	Nr0b2	Nr1h4
<b>F</b>	Nadh1	Olr1	Osbpl1a	Osbpl5	Pcsk9	Pmkv	Ppard	Prkaa1	Prkaa2	Prkg2	Scap	Scar1
<b>G</b>	Srx17	Soat1	Soat2	Sor11	Sreb1f1	Sreb1f2	Stab1	Stab2	Stard3	Tm7sf2	Treml1	Vldlr
<b>H</b>	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	RTC	RTC	RTC	PPC	PPC	PPC

## Gene table: RT<sup>2</sup> Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Mm.277376	NM_013454	Abca1	ATP-binding cassette, sub-family A (ABC1), member 1
A02	Mm.2210	NM_007379	Abca2	ATP-binding cassette, sub-family A (ABC1), member 2
A03	Mm.15691	NM_009593	Abcg1	ATP-binding cassette, sub-family G (WHITE), member 1
A04	Mm.245724	NM_177470	Acaa2	Acetyl-Coenzyme A acyltransferase 2 (mitochondrial 3-oxoacyl-Coenzyme A thiolase)
A05	Mm.262635	NM_145364	Akr1d1	Aldo-keto reductase family 1, member D1
A06	Mm.28341	NM_013913	Angptl3	Angiopoietin-like 3
A07	Mm.209642	NM_023472	Ankra2	Ankyrin repeat, family A (RFXANK-like), 2
A08	Mm.26743	NM_009692	Apoa1	Apolipoprotein A-I
A09	Mm.389209	NM_013474	Apoa2	Apolipoprotein A-II
A10	Mm.4533	NM_007468	Apoa4	Apolipoprotein A-IV
A11	Mm.221239	NM_009693	Apob	Apolipoprotein B
A12	Mm.390161	NM_023114	Apoc3	Apolipoprotein C-III
B01	Mm.2082	NM_007470	Apod	Apolipoprotein D
B02	Mm.305152	NM_009696	ApoE	Apolipoprotein E
B03	Mm.26513	NM_133997	Apof	Apolipoprotein F
B04	Mm.125650	NM_001081970	Apol8	Apolipoprotein L 8
B05	Mm.334841	NM_019707	Cdh13	Cadherin 13
B06	Mm.236017	NM_009885	Cel	Carboxyl ester lipase
B07	Mm.297477	NM_026419	Cela3b	Chymotrypsin-like elastase family, member 3B
B08	Mm.290251	NM_013493	Cnbp	Cellular nucleic acid binding protein
B09	Mm.218571	NM_130449	Colec12	Collectin sub-family member 12
B10	Mm.28767	NM_007768	Crp	C-reactive protein, pentraxin-related
B11	Mm.425692	NM_023158	Cxcl16	Chemokine (C-X-C motif) ligand 16
B12	Mm.22560	NM_029787	Cyb5r3	Cytochrome b5 reductase 3
C01	Mm.302865	NM_019779	Cyp11a1	Cytochrome P450, family 11, subfamily a, polypeptide 1
C02	Mm.376968	NM_018887	Cyp39a1	Cytochrome P450, family 39, subfamily a, polypeptide 1
C03	Mm.41911	NM_010010	Cyp46a1	Cytochrome P450, family 46, subfamily a, polypeptide 1
C04	Mm.140158	NM_020010	Cyp51	Cytochrome P450, family 51
C05	Mm.57029	NM_007824	Cyp7a1	Cytochrome P450, family 7, subfamily a, polypeptide 1
C06	Mm.316000	NM_007825	Cyp7b1	Cytochrome P450, family 7, subfamily b, polypeptide 1
C07	Mm.133370	NM_053272	Dhcr24	24-dehydrocholesterol reductase
C08	Mm.249342	NM_007856	Dhcr7	7-dehydrocholesterol reductase
C09	Mm.27183	NM_007898	Ebp	Phenylalkylamine Ca <sup>2+</sup> antagonist (emopamil) binding protein
C10	Mm.474432	NM_010191	Fdft1	Farnesyl diphosphate farnesyl transferase 1
C11	Mm.39472	NM_134469	Fdps	Farnesyl diphosphate synthetase
C12	Mm.30012	NM_133808	Hdlbp	High density lipoprotein (HDL) binding protein
D01	Mm.485394	NM_008255	Hmgcr	3-hydroxy-3-methylglutaryl-Coenzyme A reductase
D02	Mm.61526	NM_145942	Hmgcs1	3-hydroxy-3-methylglutaryl-Coenzyme A synthase 1
D03	Mm.289131	NM_008256	Hmgcs2	3-hydroxy-3-methylglutaryl-Coenzyme A synthase 2
D04	Mm.29847	NM_145360	Idi1	Isopentenyl-diphosphate delta isomerase
D05	Mm.313743	NM_177197	Idi2	Isopentenyl-diphosphate delta isomerase 2
D06	Mm.276360	NM_021283	Il4	Interleukin 4
D07	Mm.30221	NM_153526	Insig1	Insulin induced gene 1
D08	Mm.27136	NM_178082	Insig2	Insulin induced gene 2

Position	UniGene	GenBank	Symbol	Description
D09	Mm.1593	NM_008490	Lcat	Lecithin cholesterol acyltransferase
D10	Mm.3213	NM_010700	Ldlr	Low density lipoprotein receptor
D11	Mm.482148	NM_145554	Ldlrap1	Low density lipoprotein receptor adaptor protein 1
D12	Mm.277072	NM_008493	Lep	Leptin
E01	Mm.333679	NM_010719	Lipe	Lipase, hormone sensitive
E02	Mm.472719	NM_022993	Lrp10	Low-density lipoprotein receptor-related protein 10
E03	Mm.39874	NM_172814	Lrp12	Low density lipoprotein-related protein 12
E04	Mm.441398	NM_053011	Lrp1b	Low density lipoprotein-related protein 1B (deleted in tumors)
E05	Mm.321990	NM_008514	Lrp6	Low density lipoprotein receptor-related protein 6
E06	Mm.277661	NM_013587	Lrpap1	Low density lipoprotein receptor-related protein associated protein 1
E07	Mm.206934	NM_019709	Mbtps1	Membrane-bound transcription factor peptidase, site 1
E08	Mm.28146	NM_138656	Mvd	Mevalonate (diphospho) decarboxylase
E09	Mm.28088	NM_023556	Mvk	Mevalonate kinase
E10	Mm.212492	NM_207242	Npc1l1	NPC1-like 1
E11	Mm.346759	NM_011850	Nr0b2	Nuclear receptor subfamily 0, group B, member 2
E12	Mm.3095	NM_009108	Nr1h4	Nuclear receptor subfamily 1, group H, member 4
F01	Mm.38792	NM_010941	Nsdhl	NAD(P) dependent steroid dehydrogenase-like
F02	Mm.293626	NM_138648	Olr1	Oxidized low density lipoprotein (lectin-like) receptor 1
F03	Mm.259470	NM_207530	Osbpl1a	Oxysterol binding protein-like 1A
F04	Mm.21199	NM_024289	Osbpl5	Oxysterol binding protein-like 5
F05	Mm.133268	NM_153565	Pcsk9	Proprotein convertase subtilisin/kexin type 9
F06	Mm.34242	NM_026784	Pmvk	Phosphomevalonate kinase
F07	Mm.328914	NM_011145	Ppard	Peroxisome proliferator activator receptor delta
F08	Mm.207004	NM_001013367	Prkaa1	Protein kinase, AMP-activated, alpha 1 catalytic subunit
F09	Mm.48638	NM_178143	Prkaa2	Protein kinase, AMP-activated, alpha 2 catalytic subunit
F10	Mm.33649	NM_145401	Prkag2	Protein kinase, AMP-activated, gamma 2 non-catalytic subunit
F11	Mm.288741	NM_001001144	Scap	SREBF chaperone
F12	Mm.10486	NM_001004157	Scarf1	Scavenger receptor class F, member 1
G01	Mm.6118	NM_153680	Snx17	Sorting nexin 17
G02	Mm.28099	NM_009230	Soat1	Sterol O-acyltransferase 1
G03	Mm.358862	NM_146064	Soat2	Sterol O-acyltransferase 2
G04	Mm.121920	NM_011436	Sorl1	Sortilin-related receptor, LDLR class A repeats-containing
G05	Mm.278701	NM_011480	Srebf1	Sterol regulatory element binding transcription factor 1
G06	Mm.38016	NM_033218	Srebf2	Sterol regulatory element binding factor 2
G07	Mm.220821	NM_138672	Stab1	Stabilin 1
G08	Mm.279611	NM_138673	Stab2	Stabilin 2
G09	Mm.265546	NM_021547	Stard3	START domain containing 3
G10	Mm.458077	NM_028454	Tm7sf2	Transmembrane 7 superfamily member 2
G11	Mm.260989	NM_172622	Trerf1	Transcriptional regulating factor 1
G12	Mm.4141	NM_013703	Vldlr	Very low density lipoprotein receptor
H01	Mm.328431	NM_007393	Actb	Actin, beta
H02	Mm.163	NM_009735	B2m	Beta-2 microglobulin
H03	Mm.343110	NM_008084	Gapdh	Glyceraldehyde-3-phosphate dehydrogenase
H04	Mm.3317	NM_010368	Gusb	Glucuronidase, beta
H05	Mm.2180	NM_008302	Hsp90ab1	Heat shock protein 90 alpha (cytosolic), class B member 1
H06	N/A	SA_00106	MGDC	Mouse 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, RT<sup>2</sup> Profiler PCR Arrays should be used together with the RT<sup>2</sup> First Strand Kit for cDNA synthesis and RT<sup>2</sup> SYBR<sup>®</sup> Green qPCR Mastermixes for PCR.

Product	Contents	Cat. no.
RT <sup>2</sup> First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT <sup>2</sup> 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 <sup>2</sup> 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 <sup>2</sup> 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.

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RT<sup>2</sup> 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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