

RT² Profiler PCR Array (Rotor-Gene® Format)

Rat Lipoprotein Signaling & Cholesterol Metabolism

Cat. no. 330231 PARN-080ZR

For pathway expression analysis

Format	For use with the following real-time cyclers
RT ² Profiler PCR Array, Format R	Rotor-Gene Q, other Rotor-Gene cyclers

Description

The Rat 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 the Rotor-Gene format are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products.

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.



Sample & Assay Technologies

Array layout

The 96 real-time assays in the Rotor-Gene format are located in wells 1–96 of the Rotor-Disc™ (plate A1–A12=Rotor-Disc 1–12, plate B1–B12=Rotor-Disc 13–24, etc.). To maintain data analysis compatibility, wells 97–100 do not contain real-time assays but will contain master mix to account for weight balance.

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Rn.148916	NM_178095	Abca1	ATP-binding cassette, subfamily A (ABC1), member 1
A02	Rn.13115	NM_024396	Abca2	ATP-binding cassette, subfamily A (ABC1), member 2
A03	Rn.8398	NM_053502	Abcg1	ATP-binding cassette, subfamily G (WHITE), member 1
A04	Rn.3786	NM_130433	Acaa2	Acetyl-Coenzyme A acyltransferase 2
A05	Rn.25716	NM_138884	Akr1d1	Aldo-keto reductase family 1, member D1 (delta 4-3-ketosteroid-5-beta-reductase)
A06	Rn.11755	NM_001025065	Angptl3	Angiopoietin-like 3
A07	Rn.161759	NM_207595	Ankra2	Ankyrin repeat, family A (RFXANK-like), 2
A08	Rn.10308	NM_012738	Apoa1	Apolipoprotein A-I
A09	Rn.89304	NM_013112	Apoa2	Apolipoprotein A-II
A10	Rn.15739	NM_012737	Apoa4	Apolipoprotein A-IV
A11	Rn.33815	NM_019287	Apob	Apolipoprotein B
A12	Rn.8887	NM_012824	Apoc1	Apolipoprotein C-I
B01	Rn.195323	NM_012501	Apoc3	Apolipoprotein C-III
B02	Rn.11339	NM_012777	Apod	Apolipoprotein D
B03	Rn.32351	NM_138828	ApoE	Apolipoprotein E
B04	Rn.101696	NM_001024351	Apof	Apolipoprotein F
B05	Rn.214127	XM_001075828	Apol2	Apolipoprotein L, 2
B06	Rn.23806	NM_138889	Cdh13	Cadherin 13
B07	Rn.91234	NM_016997	Cel	Carboxyl ester lipase
B08	Rn.11639	NM_001106692	Cela3b	Chymotrypsin-like elastase family, member 3B
B09	Rn.6187	NM_022598	Cnbp	CCHC-type zinc finger, nucleic acid binding protein
B10	Rn.31273	NM_001025721	Colec12	Collectin sub-family member 12
B11	Rn.7070	NM_001017478	Cxcl16	Chemokine (C-X-C motif) ligand 16
B12	Rn.35994	NM_138877	Cyb5r3	Cytochrome b5 reductase 3
C01	Rn.1401	NM_017286	Cyp11a1	Cytochrome P450, family 11, subfamily a, polypeptide 1
C02	Rn.153360	NM_001106893	Cyp39a1	Cytochrome P450, family 39, subfamily a, polypeptide 1
C03	Rn.203681	NM_001108723	Cyp46a1	Cytochrome P450, family 46, subfamily a, polypeptide 1
C04	Rn.107152	NM_012941	Cyp51	Cytochrome P450, family 51
C05	Rn.10737	NM_012942	Cyp7a1	Cytochrome P450, family 7, subfamily a, polypeptide 1
C06	Rn.53969	NM_019138	Cyp7b1	Cytochrome P450, family 7, subfamily b, polypeptide 1
C07	Rn.9470	NM_001080148	Dhcr24	24-dehydrocholesterol reductase
C08	Rn.228	NM_022389	Dhcr7	7-dehydrocholesterol reductase
C09	Rn.19436	NM_057137	Ebp	Emopamil binding protein (sterol isomerase)
C10	Rn.154404	NM_019238	Fdft1	Farnesyl diphosphate farnesyl transferase 1
C11	Rn.2848	NM_031840	Fdps	Farnesyl diphosphate synthase (farnesyl pyrophosphate synthetase, dimethylallyltransferase, geranyltransferase)
C12	Rn.8515	NM_172039	Hdlbp	High density lipoprotein binding protein
D01	Rn.9437	NM_013134	Hmgcr	3-hydroxy-3-methylglutaryl-Coenzyme A reductase
D02	Rn.5106	NM_017268	Hmgcs1	3-hydroxy-3-methylglutaryl-Coenzyme A synthase 1 (soluble)
D03	Rn.29594	NM_173094	Hmgcs2	3-hydroxy-3-methylglutaryl-Coenzyme A synthase 2 (mitochondrial)
D04	Rn.10780	NM_053539	Idi1	Isopentenyl-diphosphate delta isomerase 1
D05	Rn.108255	NM_201270	Il4	Interleukin 4
D06	Rn.772	NM_022392	Insig1	Insulin induced gene 1
D07	Rn.16736	NM_178091	Insig2	Insulin induced gene 2
D08	Rn.10481	NM_017024	Lcat	Lecithin cholesterol acyltransferase
D09	Rn.10483	NM_175762	Ldlr	Low density lipoprotein receptor
D10	Rn.62309	NM_001109271	Ldlrap1	Low density lipoprotein receptor adaptor protein 1
D11	Rn.44444	NM_013076	Lep	Leptin
D12	Rn.10566	NM_012859	Lipe	Lipase, hormone sensitive
E01	Rn.101349	NM_001037777	Lrp10	Low-density lipoprotein receptor-related protein 10
E02	Rn.17834	NM_001134883	Lrp12	Low density lipoprotein-related protein 12
E03	Rn.218549	NM_001107843	Lrp1b	Low density lipoprotein-related protein 1B (deleted in tumors)
E04	Rn.32960	NM_001107892	Lrp6	Low density lipoprotein receptor-related protein 6
E05	Rn.10293	NM_001169113	Lrpap1	Low density lipoprotein receptor-related protein associated protein 1
E06	Rn.2362	NM_053569	Mbtps1	Membrane-bound transcription factor peptidase, site 1
E07	Rn.10288	NM_031062	Mvd	Mevalonate (diphospho) decarboxylase

Position	UniGene	GenBank	Symbol	Description
E08	Rn.6995	NM_031063	Mvk	Mevalonate kinase
E09	Rn.10712	NM_057133	Nr0b2	Nuclear receptor subfamily 0, group B, member 2
E10	Rn.786	NM_031626	Nr1h2	Nuclear receptor subfamily 1, group H, member 2
E11	Rn.11209	NM_031627	Nr1h3	Nuclear receptor subfamily 1, group H, member 3
E12	Rn.42943	NM_021745	Nr1h4	Nuclear receptor subfamily 1, group H, member 4
F01	Rn.23620	NM_001009399	Nsdhl	NAD(P) dependent steroid dehydrogenase-like
F02	Rn.87449	NM_133306	Olr1	Oxidized low density lipoprotein (lectin-like) receptor 1
F03	Rn.178664	NM_172023	Osbpl1a	Oxysterol binding protein-like 1A
F04	Rn.140527	NM_001015024	Osbpl5	Oxysterol binding protein-like 5
F05	Rn.19195	NM_199253	Pcsk9	Proprotein convertase subtilisin/kexin type 9
F06	Rn.22202	NM_001008352	Pmvk	Phosphomevalonate kinase
F07	Rn.96181	NM_013141	Ppard	Peroxisome proliferator-activated receptor delta
F08	Rn.87789	NM_019142	Prkaa1	Protein kinase, AMP-activated, alpha 1 catalytic subunit
F09	Rn.64583	NM_023991	Prkaa2	Protein kinase, AMP-activated, alpha 2 catalytic subunit
F10	Rn.51208	NM_184051	Prkag2	Protein kinase, AMP-activated, gamma 2 non-catalytic subunit
F11	Rn.220760	XM_225498	RGD156499 9	Similar to isopentenyl-diphosphate delta isomerase 2
F12	Rn.99548	NM_001100966	Scap	SREBF chaperone
G01	Rn.130912	NM_001107022	Scarf1	Scavenger receptor class F, member 1
G02	Rn.162846	NM_001011981	Snx17	Sorting nexin 17
G03	Rn.59	NM_031118	Soat1	Sterol O-acyltransferase 1
G04	Rn.83628	NM_153728	Soat2	Sterol O-acyltransferase 2
G05	Rn.92871	XM_217115	Sorl1	Sortilin-related receptor, LDLR class A repeats-containing
G06	Rn.221929	XM_213329	Srebf1	Sterol regulatory element binding transcription factor 1
G07	Rn.41063	NM_001033694	Srebf2	Sterol regulatory element binding transcription factor 2
G08	Rn.127827	XM_002726890	Stab2	Stabilin 2
G09	Rn.145430	NM_001014229	Stard3	StAR-related lipid transfer (START) domain containing 3
G10	Rn.8313	NM_001013071	Tm7sf2	Transmembrane 7 superfamily member 2
G11	Rn.91677	NM_001108199	Trerf1	Transcriptional regulating factor 1
G12	Rn.9975	NM_013155	Vldlr	Very low density lipoprotein receptor
H01	Rn.94978	NM_031144	Actb	Actin, beta
H02	Rn.1868	NM_012512	B2m	Beta-2 microglobulin
H03	Rn.47	NM_012583	Hprt1	Hypoxanthine phosphoribosyltransferase 1
H04	Rn.107896	NM_017025	Ldha	Lactate dehydrogenase A
H05	Rn.973	NM_001007604	Rplp1	Ribosomal protein, large, P1
H06	N/A	U26919	RGDC	Rat 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 ROX [™] FAST Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the Rotor-Gene Q and other Rotor-Gene cyclers	330620

* 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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