

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

Mouse GPCR Signaling PathwayFinder

Cat. no. 330231 PAMM-071ZA

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 Mouse G-Protein-Coupled Receptor Signaling PathwayFinder RT² Profiler PCR Array profiles the expression of 84 genes representative of and involved in GPCR-mediated signal transduction pathways. G-protein Coupled Receptors (GPCRs) that are represented on this array include bioactive lipid receptors, metabotropic glutamate receptors (mGluRs), GABA-B-like receptors, rhodopsin-like receptors, and secretin-like receptors. Members of the intricate network of intracellular signaling pathways involved in GPCR-mediated signal transduction are also represented on this array including the cAMP / PKA Pathway, Calcium / PKC Pathway, Calcium / NFAT Pathway, PLC Pathway, Protein Tyrosine Kinase Pathway, PKC / MEK Pathway, p43 / p44MAP Pathway, p38 MAP Pathway, PI-3 Kinase Pathway, NO-cGMP Pathway, Rho Pathway, NFκB Pathway and Jak / Stat Pathway. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to GPCR-mediated signaling 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 cyclers (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	Adcy5	Adora2a	Adrb1	Adrb2	Agt	Agtr1a	Agtr1b	Agtr2	Agtrap	Akt1	Arrb1	Arrb2
B	Bai1	Bcl2	Bcl2l1	Calcr	Calclrl	Casr	Ccl2	Ccl4	Ccnd1	Ccne1	Ccne2	Cdkn1a
C	Cdkn1b	Cflar	Col1a1	Crhr1	Crhr2	Ctgf	Cyp19a1	Drd1a	Drd2	Dusp14	Edn1	Egr1
D	Elk4	Fgf2	Fos	Galr2	Gcgr	Gnaq	Gnas	Grm1	Grm2	Grm4	Grm5	Grm7
E	Icam1	Il1b	Il1r1	Il1r2	Il2	Jun	Junb	Kcnh8	Lhcgrr	Lpar1	Lpar2	Max
F	Mmp9	Myc	Nos2	Oprd1	Oprk1	Pdk1	Pik3cg	Prkca	Plgdr	Plgs2	Rgs2	Rho
G	S1pr1	S1pr2	S1pr3	Sctr	Serpine1	Socs1	Tnf	Tshr	Ucp1	Vcam1	Vegfa	Ywhaz
H	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Mm.41137	NM_001012765	Adcy5	Adenylate cyclase 5
A02	Mm.333734	NM_009630	Adora2a	Adenosine A2a receptor
A03	Mm.46797	NM_007419	Adrb1	Adrenergic receptor, beta 1
A04	Mm.5598	NM_007420	Adrb2	Adrenergic receptor, beta 2
A05	Mm.301626	NM_007428	Agt	Angiotensinogen (serpin peptidase inhibitor, clade A, member 8)
A06	Mm.35062	NM_177322	Agtr1a	Angiotensin II receptor, type 1a
A07	Mm.134863	NM_175086	Agtr1b	Angiotensin II receptor, type 1b
A08	Mm.2679	NM_007429	Agtr2	Angiotensin II receptor, type 2
A09	Mm.46247	NM_009642	Agtrap	Angiotensin II, type I receptor-associated protein
A10	Mm.6645	NM_009652	Akt1	Thymoma viral proto-oncogene 1
A11	Mm.260193	NM_177231	Arrb1	Arrestin, beta 1
A12	Mm.203747	NM_145429	Arrb2	Arrestin, beta 2
B01	Mm.43133	NM_174991	Bai1	Brain-specific angiogenesis inhibitor 1
B02	Mm.257460	NM_009741	Bcl2	B-cell leukemia/lymphoma 2
B03	Mm.238213	NM_009743	Bcl2l1	Bcl2-like 1
B04	Mm.4642	NM_007588	Calcr	Calcitonin receptor
B05	Mm.75467	NM_018782	Calclrl	Calcitonin receptor-like
B06	Mm.103619	NM_013803	Casr	Calcium-sensing receptor
B07	Mm.290320	NM_011333	Ccl2	Chemokine (C-C motif) ligand 2
B08	Mm.244263	NM_013652	Ccl4	Chemokine (C-C motif) ligand 4
B09	Mm.273049	NM_007631	Ccnd1	Cyclin D1
B10	Mm.16110	NM_007633	Ccne1	Cyclin E1
B11	Mm.35867	NM_009830	Ccne2	Cyclin E2
B12	Mm.195663	NM_007669	Cdkn1a	Cyclin-dependent kinase inhibitor 1A (P21)
C01	Mm.2958	NM_009875	Cdkn1b	Cyclin-dependent kinase inhibitor 1B
C02	Mm.336848	NM_009805	Cflar	CASP8 and FADD-like apoptosis regulator
C03	Mm.277735	NM_007742	Col1a1	Collagen, type I, alpha 1
C04	Mm.1892	NM_007762	Crhr1	Corticotropin releasing hormone receptor 1
C05	Mm.236081	NM_009953	Crhr2	Corticotropin releasing hormone receptor 2
C06	Mm.390287	NM_010217	Ctgf	Connective tissue growth factor
C07	Mm.5199	NM_007810	Cyp19a1	Cytochrome P450, family 19, subfamily a, polypeptide 1
C08	Mm.54161	NM_010076	Drd1a	Dopamine receptor D1A
C09	Mm.41970	NM_010077	Drd2	Dopamine receptor D2
C10	Mm.240885	NM_019819	Dusp14	Dual specificity phosphatase 14
C11	Mm.14543	NM_010104	Edn1	Endothelin 1
C12	Mm.181959	NM_007913	Egr1	Early growth response 1
D01	Mm.254233	NM_007923	Elk4	ELK4, member of ETS oncogene family
D02	Mm.473689	NM_008006	Fgf2	Fibroblast growth factor 2
D03	Mm.246513	NM_010234	Fos	FBJ osteosarcoma oncogene
D04	Mm.57149	NM_010254	Galr2	Galanin receptor 2
D05	Mm.22329	NM_008101	Gcgr	Glucagon receptor
D06	Mm.439701	NM_008139	Gnaq	Guanine nucleotide binding protein, alpha q polypeptide
D07	Mm.125770	NM_010309	Gnas	GNAS (guanine nucleotide binding protein, alpha stimulating) complex locus
D08	Mm.391904	NM_016976	Grm1	Glutamate receptor, metabotropic 1
D09	Mm.410822	NM_001160353	Grm2	Glutamate receptor, metabotropic 2

Position	UniGene	GenBank	Symbol	Description
D10	Mm.358940	NM_001013385	Grm4	Glutamate receptor, metabotropic 4
D11	Mm.235018	NM_001081414	Grm5	Glutamate receptor, metabotropic 5
D12	Mm.240881	NM_177328	Grm7	Glutamate receptor, metabotropic 7
E01	Mm.435508	NM_010493	Icam1	Intercellular adhesion molecule 1
E02	Mm.222830	NM_008361	Il1b	Interleukin 1 beta
E03	Mm.896	NM_008362	Il1r1	Interleukin 1 receptor, type I
E04	Mm.1349	NM_010555	Il1r2	Interleukin 1 receptor, type II
E05	Mm.14190	NM_008366	Il2	Interleukin 2
E06	Mm.275071	NM_010591	Jun	Jun oncogene
E07	Mm.1167	NM_008416	Junb	Jun-B oncogene
E08	Mm.399068	NM_001031811	Kcnh8	Potassium voltage-gated channel, subfamily H (eag-related), member 8
E09	Mm.1644	NM_013582	Lhcgr	Luteinizing hormone/choriogonadotropin receptor
E10	Mm.4772	NM_010336	Lpar1	Lysophosphatidic acid receptor 1
E11	Mm.23253	NM_020028	Lpar2	Lysophosphatidic acid receptor 2
E12	Mm.268548	NM_008558	Max	Max protein
F01	Mm.4406	NM_013599	Mmp9	Matrix metalloproteinase 9
F02	Mm.2444	NM_010849	Myc	Myelocytomatosis oncogene
F03	Mm.2893	NM_010927	Nos2	Nitric oxide synthase 2, inducible
F04	Mm.5243	NM_013622	Oprd1	Opioid receptor, delta 1
F05	Mm.7977	NM_011011	Oprk1	Opioid receptor, kappa 1
F06	Mm.10504	NM_011062	Pdk1	3-phosphoinositide dependent protein kinase 1
F07	Mm.101369	NM_020272	Pik3cg	Phosphoinositide-3-kinase, catalytic, gamma polypeptide
F08	Mm.222178	NM_011101	Prkca	Protein kinase C, alpha
F09	Mm.5105	NM_008962	Ptgdr	Prostaglandin D receptor
F10	Mm.292547	NM_011198	Ptgs2	Prostaglandin-endoperoxide synthase 2
F11	Mm.28262	NM_009061	Rgs2	Regulator of G-protein signaling 2
F12	Mm.2965	NM_145383	Rho	Rhodopsin
G01	Mm.982	NM_007901	S1pr1	Sphingosine-1-phosphate receptor 1
G02	Mm.46493	NM_010333	S1pr2	Sphingosine-1-phosphate receptor 2
G03	Mm.136736	NM_010101	S1pr3	Sphingosine-1-phosphate receptor 3
G04	Mm.189223	NM_001012322	Scr	Secretin receptor
G05	Mm.250422	NM_008871	Serpine1	Serine (or cysteine) peptidase inhibitor, clade E, member 1
G06	Mm.130	NM_009896	Socs1	Suppressor of cytokine signaling 1
G07	Mm.1293	NM_013693	Tnf	Tumor necrosis factor
G08	Mm.173847	NM_011648	Tshr	Thyroid stimulating hormone receptor
G09	Mm.4177	NM_009463	Ucp1	Uncoupling protein 1 (mitochondrial, proton carrier)
G10	Mm.76649	NM_011693	Vcam1	Vascular cell adhesion molecule 1
G11	Mm.282184	NM_009505	Vegfa	Vascular endothelial growth factor A
G12	Mm.3360	NM_011740	Ywhaz	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide
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, 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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