

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

Rat GPCR Signaling PathwayFinder

Cat. no. 330231 PARN-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 Rat 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	Agtr1b	Agtr2	Agtrap	Akt1	Arrb1	Arrb2	Bai1
B	Bcl2	Bcl2l1	Calcr	Calclrl	Casr	Ccl2	Ccl4	Ccnd1	Ccne1	Ccne2	Cdkn1a	Cdkn1b
C	Cflar	Col1a1	Crhr1	Crhr2	Ctgf	Cyp19a1	Drd1a	Drd2	Dusp14	Edn1	Egr1	Elk1
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	Pdpl1	Pik3cg	Prkca	Ptgs2	Pth1r	Rgs2	Rho
G	S1pr1	S1pr2	S1pr3	Sctr	Serpine1	Socs1	Tnf	Tshr	Ucp1	Vcam1	Vegfa	Ywhaz
H	Actb	B2m	Hprt1	Ldha	Rplp1	RGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Rn.6278	NM_022600	Adcy5	Adenylate cyclase 5
A02	Rn.11180	NM_053294	Adora2a	Adenosine A2a receptor
A03	Rn.87064	NM_012701	Adrb1	Adrenergic, beta-1-, receptor
A04	Rn.10206	NM_012492	Adrb2	Adrenergic, beta-2-, receptor, surface
A05	Rn.6319	NM_134432	Agt	Angiotensinogen (serpin peptidase inhibitor, clade A, member 8)
A06	Rn.9815	NM_031009	Agtr1b	Angiotensin II receptor, type 1b
A07	Rn.162367	NM_012494	Agtr2	Angiotensin II receptor, type 2
A08	Rn.8471	NM_001007654	Agtrap	Angiotensin II receptor-associated protein
A09	Rn.11422	NM_033230	Akt1	V-akt murine thymoma viral oncogene homolog 1
A10	Rn.34876	NM_012910	Arrb1	Arrestin, beta 1
A11	Rn.32973	NM_012911	Arrb2	Arrestin, beta 2
A12	Rn.103502	XM_343260	Bai1	Brain-specific angiogenesis inhibitor 1
B01	Rn.9996	NM_016993	Bcl2	B-cell CLL/lymphoma 2
B02	Rn.10323	NM_031535	Bcl2l1	Bcl2-like 1
B03	Rn.10062	NM_053816	Calcr	Calcitonin receptor
B04	Rn.11202	NM_012717	Calclrl	Calcitonin receptor-like
B05	Rn.10019	NM_016996	Casr	Calcium-sensing receptor
B06	Rn.4772	NM_031530	Ccl2	Chemokine (C-C motif) ligand 2
B07	Rn.37880	NM_053858	Ccl4	Chemokine (C-C motif) ligand 4
B08	Rn.22279	NM_171992	Ccnd1	Cyclin D1
B09	Rn.15455	NM_001100821	Ccne1	Cyclin E1
B10	Rn.98992	NM_001108656	Ccne2	Cyclin E2
B11	Rn.10089	NM_080782	Cdkn1a	Cyclin-dependent kinase inhibitor 1A
B12	Rn.29897	NM_031762	Cdkn1b	Cyclin-dependent kinase inhibitor 1B
C01	Rn.204752	NM_057138	Cflar	CASP8 and FADD-like apoptosis regulator
C02	Rn.2953	NM_053304	Col1a1	Collagen, type I, alpha 1
C03	Rn.10499	NM_030999	Crhr1	Corticotropin releasing hormone receptor 1
C04	Rn.10023	NM_022714	Crhr2	Corticotropin releasing hormone receptor 2
C05	Rn.17145	NM_022266	Ctgf	Connective tissue growth factor
C06	Rn.21402	NM_017085	Cyp19a1	Cytochrome P450, family 19, subfamily a, polypeptide 1
C07	Rn.24039	NM_012546	Drd1a	Dopamine receptor D1A
C08	Rn.87299	NM_012547	Drd2	Dopamine receptor D2
C09	Rn.25406	NM_001079893	Dusp14	Dual specificity phosphatase 14
C10	Rn.10918	NM_012548	Edn1	Endothelin 1
C11	Rn.9096	NM_012551	Egr1	Early growth response 1
C12	Rn.204602	XM_001055949	Elk1	ELK1, member of ETS oncogene family
D01	Rn.204345	NM_001107173	Elk4	ELK4, ETS-domain protein (SRF accessory protein 1)
D02	Rn.31808	NM_019305	Fgf2	Fibroblast growth factor 2
D03	Rn.103750	NM_022197	Fos	FBJ osteosarcoma oncogene
D04	Rn.9789	NM_019172	Galr2	Galanin receptor 2
D05	Rn.11225	NM_172092	Gcgr	Glucagon receptor
D06	Rn.22817	NM_031036	Gnaq	Guanine nucleotide binding protein (G protein), q polypeptide
D07	Rn.31	NM_019132	Gnas	GNAS complex locus
D08	Rn.87787	NM_017011	Grm1	Glutamate receptor, metabotropic 1
D09	Rn.9681	NM_001105711	Grm2	Glutamate receptor, metabotropic 2

Position	UniGene	GenBank	Symbol	Description
D10	Rn.89046	NM_022666	Grm4	Glutamate receptor, metabotropic 4
D11	Rn.29972	NM_017012	Grm5	Glutamate receptor, metabotropic 5
D12	Rn.10409	NM_031040	Grm7	Glutamate receptor, metabotropic 7
E01	Rn.12	NM_012967	Icam1	Intercellular adhesion molecule 1
E02	Rn.9869	NM_031512	Il1b	Interleukin 1 beta
E03	Rn.9758	NM_013123	Il1r1	Interleukin 1 receptor, type I
E04	Rn.10758	NM_053953	Il1r2	Interleukin 1 receptor, type II
E05	Rn.9871	NM_053836	Il2	Interleukin 2
E06	Rn.93714	NM_021835	Jun	Jun oncogene
E07	Rn.15806	NM_021836	Junb	Jun B proto-oncogene
E08	Rn.30029	NM_145095	Kcnh8	Potassium voltage-gated channel, subfamily H (eag-related), member 8
E09	Rn.11216	NM_012978	Lhcgr	Luteinizing hormone/choriogonadotropin receptor
E10	Rn.11200	NM_053936	Lpar1	Lysophosphatidic acid receptor 1
E11	Rn.14855	NM_001109109	Lpar2	Lysophosphatidic acid receptor 2
E12	Rn.4210	NM_022210	Max	MYC associated factor X
F01	Rn.10209	NM_031055	Mmp9	Matrix metalloproteinase 9
F02	Rn.12072	NM_012603	Myc	Myelocytomatosis oncogene
F03	Rn.10400	NM_012611	Nos2	Nitric oxide synthase 2, inducible
F04	Rn.10310	NM_012617	Oprd1	Opioid receptor, delta 1
F05	Rn.89571	NM_017167	Oprk1	Opioid receptor, kappa 1
F06	Rn.10905	NM_031081	Pdk1	3-phosphoinositide dependent protein kinase-1
F07	Rn.152697	NM_001106723	Pik3cg	Phosphoinositide-3-kinase, catalytic, gamma polypeptide
F08	Rn.207908	NM_001105713	Prka	Protein kinase C, alpha
F09	Rn.44369	NM_017232	Ptgs2	Prostaglandin-endoperoxide synthase 2
F10	Rn.48025	NM_020073	Pth1r	Parathyroid hormone 1 receptor
F11	Rn.1892	NM_053453	Rgs2	Regulator of G-protein signaling 2
F12	Rn.92530	NM_033441	Rho	Rhodopsin
G01	Rn.109455	NM_017301	S1pr1	Sphingosine-1-phosphate receptor 1
G02	Rn.2491	NM_017192	S1pr2	Sphingosine-1-phosphate receptor 2
G03	Rn.108119	XM_225216	S1pr3	Sphingosine-1-phosphate receptor 3
G04	Rn.32256	NM_031115	Scnr	Secretin receptor
G05	Rn.29367	NM_012620	Serpine1	Serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1
G06	Rn.82754	NM_145879	Socs1	Suppressor of cytokine signaling 1
G07	Rn.2275	NM_012675	Tnf	Tumor necrosis factor (TNF superfamily, member 2)
G08	Rn.87913	NM_012888	Tshr	Thyroid stimulating hormone receptor
G09	Rn.10281	NM_012682	Ucp1	Uncoupling protein 1 (mitochondrial, proton carrier)
G10	Rn.11267	NM_012889	Vcam1	Vascular cell adhesion molecule 1
G11	Rn.1923	NM_031836	Vegfa	Vascular endothelial growth factor A
G12	Rn.1292	NM_013011	Ywhaz	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide
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 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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