

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

Rat Common Cytokines

Cat. no. 330231 PARN-021ZA

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 Common Cytokines RT² Profiler PCR Array profiles the expression of 84 important cytokine genes. This array includes interferons and interleukins as well as the bone morphogenetic proteins (BMP) and members of the TGF- β family. Also represented are platelet-derived and vascular endothelial growth factors. Tumor necrosis factors are included as well as other cytokine-related genes. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to cytokines 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	Adipoq	Aimp1	Areg	Bmp1	Bmp2	Bmp3	Bmp4	Bmp5	Bmp6	Bmp7	C5	Cd40lg
B	Cd70	Cnff	Csf1	Csf2	Csf3	Ctf1	Faslg	Fgf10	Gdf15	Gdf5	Gdf9	Grem1
C	Ifna1	Ifna2	Ifna4	Ifnb1	Ifng	Il10	Il11	Il12a	Il12b	Il13	Il15	Il16
D	Il17a	Il17b	Il17f	Il18	Il1a	Il1b	Il1rn	Il2	Il20	Il21	Il22	Il23a
E	Il24	Il27	Il3	Il33	Il4	Il5	Il6	Il7	Il9	Inha	Inhba	Lif
F	Lta	Ltb	Mif	Mtn	Nampt	Nodal	Nrg1	Osm	Scgb3a1	Spp1	Tgfb1	Tgfb2
G	Thpo	Tnf	Tnfrsf11b	Tnfrsf10	Tnfrsf11	Tnfrsf12	Tnfrsf13	Tnfrsf15	Tnfrsf18	Tnfrsf4	Tnfrsf9	Vegfa
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.24299	NM_144744	Adipoq	Adiponectin, C1Q and collagen domain containing
A02	Rn.3192	NM_053757	Aimp1	Aminoacyl tRNA synthetase complex-interacting multifunctional protein 1
A03	Rn.10568	NM_017123	Areg	Amphiregulin
A04	Rn.9305	NM_031323	Bmp1	Bone morphogenetic protein 1
A05	Rn.90931	NM_017178	Bmp2	Bone morphogenetic protein 2
A06	Rn.208979	NM_017105	Bmp3	Bone morphogenetic protein 3
A07	Rn.10318	NM_012827	Bmp4	Bone morphogenetic protein 4
A08	Rn.135799	NM_001108168	Bmp5	Bone morphogenetic protein 5
A09	Rn.40476	NM_013107	Bmp6	Bone morphogenetic protein 6
A10	Rn.18030	XM_342591	Bmp7	Bone morphogenetic protein 7
A11	Rn.21259	XM_342421	C5	Complement component 5
A12	Rn.44218	NM_053353	Cd40lg	CD40 ligand
B01	Rn.103013	NM_001106878	Cd70	Cd70 molecule
B02	Rn.6067	NM_013166	Cnff	Ciliary neurotrophic factor
B03	Rn.83632	NM_023981	Csf1	Colony stimulating factor 1 (macrophage)
B04	Rn.44285	XM_340799	Csf2	Colony stimulating factor 2 (granulocyte-macrophage)
B05	Rn.53973	NM_017104	Csf3	Colony stimulating factor 3 (granulocyte)
B06	Rn.10253	NM_017129	Ctf1	Cardiotrophin 1
B07	Rn.9725	NM_012908	Faslg	Fas ligand (TNF superfamily, member 6)
B08	Rn.44439	NM_012951	Fgf10	Fibroblast growth factor 10
B09	Rn.44228	NM_019216	Gdf15	Growth differentiation factor 15
B10	Rn.127822	XM_001066344	Gdf5	Growth differentiation factor 5
B11	Rn.42874	NM_021672	Gdf9	Growth differentiation factor 9
B12	Rn.42929	NM_019282	Grem1	Gremlin 1, cysteine knot superfamily, homolog (Xenopus laevis)
C01	Rn.196548	NM_001014786	Ifna1	Interferon-alpha 1
C02	N/A	XM_233152	Ifna2	Interferon alpha family, gene 2
C03	Rn.218577	NM_001106667	Ifna4	Interferon, alpha 4
C04	Rn.138105	NM_019127	Ifnb1	Interferon beta 1, fibroblast
C05	Rn.10795	NM_138880	Ifng	Interferon gamma
C06	Rn.9868	NM_012854	Il10	Interleukin 10
C07	Rn.198483	NM_133519	Il11	Interleukin 11
C08	Rn.207199	NM_053390	Il12a	Interleukin 12a
C09	Rn.48686	NM_022611	Il12b	Interleukin 12b
C10	Rn.9921	NM_053828	Il13	Interleukin 13
C11	Rn.2490	NM_013129	Il15	Interleukin 15
C12	Rn.104665	NM_001105749	Il16	Interleukin 16
D01	Rn.218513	NM_001106897	Il17a	Interleukin 17A
D02	Rn.50003	NM_053789	Il17b	Interleukin 17B
D03	Rn.34022	NM_001015011	Il17f	Interleukin 17F
D04	Rn.11118	NM_019165	Il18	Interleukin 18
D05	Rn.12300	NM_017019	Il1a	Interleukin 1 alpha
D06	Rn.9869	NM_031512	Il1b	Interleukin 1 beta
D07	Rn.162640	NM_022194	Il1rn	Interleukin 1 receptor antagonist
D08	Rn.9871	NM_053836	Il2	Interleukin 2
D09	Rn.222008	NM_001143881	Il20	Interleukin 20

Position	UniGene	GenBank	Symbol	Description
D10	Rn.214949	NM_001108943	Il21	Interleukin 21
D11	Rn.195879	XM_576228	Il22	Interleukin 22
D12	Rn.81073	NM_130410	Il23a	Interleukin 23, alpha subunit p19
E01	Rn.48710	NM_133311	Il24	Interleukin 24
E02	N/A	XM_344962	Il27	Interleukin 27
E03	Rn.10652	NM_031513	Il3	Interleukin 3
E04	Rn.106849	NM_001014166	Il33	Interleukin 33
E05	Rn.108255	NM_201270	Il4	Interleukin 4
E06	Rn.44227	NM_021834	Il5	Interleukin 5
E07	Rn.9873	NM_012589	Il6	Interleukin 6
E08	Rn.10793	NM_013110	Il7	Interleukin 7
E09	Rn.92374	NM_001105747	Il9	Interleukin 9
E10	Rn.8831	NM_012590	Inha	Inhibin alpha
E11	Rn.9874	NM_017128	Inhba	Inhibin beta-A
E12	Rn.44379	NM_022196	Lif	Leukemia inhibitory factor
F01	Rn.160577	NM_080769	Lta	Lymphotoxin alpha (TNF superfamily, member 1)
F02	Rn.203016	NM_212507	Ltb	Lymphotoxin beta (TNF superfamily, member 3)
F03	Rn.2661	NM_031051	Mif	Macrophage migration inhibitory factor
F04	Rn.44460	NM_019151	Mstn	Myostatin
F05	Rn.203508	NM_177928	Nampt	Nicotinamide phosphoribosyltransferase
F06	Rn.218528	NM_001106394	Nodal	Nodal homolog (mouse)
F07	Rn.37438	NM_031588	Nrg1	Neuregulin 1
F08	Rn.127158	NM_001006961	Osm	Oncostatin M
F09	Rn.30648	NM_001013180	Scgb3a1	Secretoglobin, family 3A, member 1
F10	Rn.8871	NM_012881	Spp1	Secreted phosphoprotein 1
F11	Rn.40136	NM_021578	Tgfb1	Transforming growth factor, beta 1
F12	Rn.24539	NM_031131	Tgfb2	Transforming growth factor, beta 2
G01	Rn.10576	NM_031133	Thpo	Thrombopoietin
G02	Rn.2275	NM_012675	Tnf	Tumor necrosis factor (TNF superfamily, member 2)
G03	Rn.202973	NM_012870	Tnfrsf11b	Tumor necrosis factor receptor superfamily, member 11b
G04	Rn.83627	NM_145681	Tnfsf10	Tumor necrosis factor (ligand) superfamily, member 10
G05	Rn.64517	NM_057149	Tnfsf11	Tumor necrosis factor (ligand) superfamily, member 11
G06	Rn.3211	NM_001001513	Tnfsf12	Tumor necrosis factor ligand superfamily member 12
G07	Rn.19955	NM_001009623	Tnfsf13	Tumor necrosis factor (ligand) superfamily, member 13
G08	Rn.84873	NM_145765	Tnfsf15	Tumor necrosis factor (ligand) superfamily, member 15
G09	N/A	XM_344166	Tnfsf18	Tumor necrosis factor (ligand) superfamily, member 18
G10	Rn.30043	NM_053552	Tnfsf4	Tumor necrosis factor (ligand) superfamily, member 4
G11	Rn.185237	NM_181384	Tnfsf9	Tumor necrosis factor (ligand) superfamily, member 9
G12	Rn.1923	NM_031836	Vegfa	Vascular endothelial growth factor A
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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