

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

Human Neurotransmitter Receptors

Cat. no. 330231 PAHS-060ZA

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 Human Neurotransmitter Receptors RT² Profiler PCR Array profiles the expression of 84 genes involved in modulating the biological processes of neurotransmitter biosynthesis, uptake, transport and signaling through neurotransmitter receptors. This array contains receptors for specific neurotransmitters, such as acetylcholine, benzodiazepine, dopamine, gamma-aminobutyric acid (GABA), glutamate, serotonin, somatostatin and neuropeptides. Genes involved in the regulation of neurotransmitter levels are included as well. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to the neuronal system 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	ADRA1A	ADRA1D	ADRA2A	ADRB2	ADRB3	AVPR1A	AVPR1B	BRS3	CCKBR	CHRM1	CHRM4	CHRM5
B	CHRNA3	CHRNA4	CHRNA5	CHRNA6	CHRNA7	CHRNE	CNR1	DRD1	DRD2	DRD5	GABBR1	GABBR2
C	GABRA1	GABRA2	GABRA4	GABRA5	GABRA6	GABRB1	GABRB3	GABRD	GABRE	GABRG1	GABRG2	GABRG3
D	GABRQ	GABRR1	GABRR2	GCGR	GRIA1	GRIA2	GRIA3	GRIK1	GRIK2	GRIK4	GRIK5	GRIN1
E	GRIN2A	GRIN2B	GRIN2C	GRM1	GRM3	GRM4	GRM5	GRM6	GRM7	GRM8	GRPR	HCRT2
F	HRH1	HRH4	HTR1A	HTR1B	HTR1D	HTR1F	HTR2A	HTR2C	HTR3A	HTR4	HTR7	NPY2R
G	NPY5R	NTSR2	OXTR	PROKR2	SCTR	SSTR1	SSTR2	SSTR4	TACR1	TACR2	TACR3	TSPO
H	ACTB	B2M	GAPDH	HPRT1	RPLP0	HGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Hs.709175	NM_033303	ADRA1A	Adrenergic, alpha-1A-, receptor
A02	Hs.557	NM_000678	ADRA1D	Adrenergic, alpha-1D-, receptor
A03	Hs.249159	NM_000681	ADRA2A	Adrenergic, alpha-2A-, receptor
A04	Hs.591251	NM_000024	ADRB2	Adrenergic, beta-2-, receptor, surface
A05	Hs.2549	NM_000025	ADRB3	Adrenergic, beta-3-, receptor
A06	Hs.2131	NM_000706	AVPR1A	Arginine vasopressin receptor 1A
A07	Hs.1372	NM_000707	AVPR1B	Arginine vasopressin receptor 1B
A08	Hs.121484	NM_001727	BRS3	Bombesin-like receptor 3
A09	Hs.203	NM_176875	CCKBR	Cholecystokinin B receptor
A10	Hs.632119	NM_000738	CHRM1	Cholinergic receptor, muscarinic 1
A11	Hs.248100	NM_000741	CHRM4	Cholinergic receptor, muscarinic 4
A12	Hs.584747	NM_012125	CHRM5	Cholinergic receptor, muscarinic 5
B01	Hs.89605	NM_000743	CHRNA3	Cholinergic receptor, nicotinic, alpha 3
B02	Hs.10734	NM_000744	CHRNA4	Cholinergic receptor, nicotinic, alpha 4
B03	Hs.1614	NM_000745	CHRNA5	Cholinergic receptor, nicotinic, alpha 5
B04	Hs.103128	NM_004198	CHRNA6	Cholinergic receptor, nicotinic, alpha 6
B05	Hs.511772	NM_000746	CHRNA7	Cholinergic receptor, nicotinic, alpha 7
B06	Hs.654535	NM_000080	CHRNE	Cholinergic receptor, nicotinic, epsilon
B07	Hs.75110	NM_016083	CNR1	Cannabinoid receptor 1 (brain)
B08	Hs.2624	NM_000794	DRD1	Dopamine receptor D1
B09	Hs.73893	NM_000795	DRD2	Dopamine receptor D2
B10	Hs.380681	NM_000798	DRD5	Dopamine receptor D5
B11	Hs.167017	NM_001470	GABBR1	Gamma-aminobutyric acid (GABA) B receptor, 1
B12	Hs.198612	NM_005458	GABBR2	Gamma-aminobutyric acid (GABA) B receptor, 2
C01	Hs.175934	NM_000806	GABRA1	Gamma-aminobutyric acid (GABA) A receptor, alpha 1
C02	Hs.116250	NM_000807	GABRA2	Gamma-aminobutyric acid (GABA) A receptor, alpha 2
C03	Hs.248112	NM_000809	GABRA4	Gamma-aminobutyric acid (GABA) A receptor, alpha 4
C04	Hs.612087	NM_000810	GABRA5	Gamma-aminobutyric acid (GABA) A receptor, alpha 5
C05	Hs.90791	NM_000811	GABRA6	Gamma-aminobutyric acid (GABA) A receptor, alpha 6
C06	Hs.27283	NM_000812	GABRB1	Gamma-aminobutyric acid (GABA) A receptor, beta 1
C07	Hs.302352	NM_000814	GABRB3	Gamma-aminobutyric acid (GABA) A receptor, beta 3
C08	Hs.113882	NM_000815	GABRD	Gamma-aminobutyric acid (GABA) A receptor, delta
C09	Hs.22785	NM_004961	GABRE	Gamma-aminobutyric acid (GABA) A receptor, epsilon
C10	Hs.375051	NM_173536	GABRG1	Gamma-aminobutyric acid (GABA) A receptor, gamma 1
C11	Hs.7195	NM_000816	GABRG2	Gamma-aminobutyric acid (GABA) A receptor, gamma 2
C12	Hs.569475	NM_033223	GABRG3	Gamma-aminobutyric acid (GABA) A receptor, gamma 3
D01	Hs.283081	NM_018558	GABRQ	Gamma-aminobutyric acid (GABA) receptor, theta
D02	Hs.437745	NM_002042	GABRR1	Gamma-aminobutyric acid (GABA) receptor, rho 1
D03	Hs.99927	NM_002043	GABRR2	Gamma-aminobutyric acid (GABA) receptor, rho 2
D04	Hs.208	NM_000160	GCGR	Glucagon receptor
D05	Hs.519693	NM_000827	GRIA1	Glutamate receptor, ionotropic, AMPA 1
D06	Hs.32763	NM_000826	GRIA2	Glutamate receptor, ionotropic, AMPA 2
D07	Hs.377070	NM_000828	GRIA3	Glutamate receptor, ionotropic, AMPA 3
D08	Hs.706747	NM_000830	GRIK1	Glutamate receptor, ionotropic, kainate 1
D09	Hs.98262	NM_021956	GRIK2	Glutamate receptor, ionotropic, kainate 2

Position	UniGene	GenBank	Symbol	Description
D10	Hs.568901	NM_014619	GRIK4	Glutamate receptor, ionotropic, kainate 4
D11	Hs.367799	NM_002088	GRIK5	Glutamate receptor, ionotropic, kainate 5
D12	Hs.558334	NM_007327	GRIN1	Glutamate receptor, ionotropic, N-methyl D-aspartate 1
E01	Hs.411472	NM_000833	GRIN2A	Glutamate receptor, ionotropic, N-methyl D-aspartate 2A
E02	Hs.654430	NM_000834	GRIN2B	Glutamate receptor, ionotropic, N-methyl D-aspartate 2B
E03	Hs.436980	NM_000835	GRIN2C	Glutamate receptor, ionotropic, N-methyl D-aspartate 2C
E04	Hs.32945	NM_000838	GRM1	Glutamate receptor, metabotropic 1
E05	Hs.590575	NM_000840	GRM3	Glutamate receptor, metabotropic 3
E06	Hs.654847	NM_000841	GRM4	Glutamate receptor, metabotropic 4
E07	Hs.147361	NM_000842	GRM5	Glutamate receptor, metabotropic 5
E08	Hs.248131	NM_000843	GRM6	Glutamate receptor, metabotropic 6
E09	Hs.606393	NM_000844	GRM7	Glutamate receptor, metabotropic 7
E10	Hs.449625	NM_000845	GRM8	Glutamate receptor, metabotropic 8
E11	Hs.567282	NM_005314	GRPR	Gastrin-releasing peptide receptor
E12	Hs.151624	NM_001526	HCRTR2	Hypocretin (orexin) receptor 2
F01	Hs.1570	NM_000861	HRH1	Histamine receptor H1
F02	Hs.287388	NM_021624	HRH4	Histamine receptor H4
F03	Hs.247940	NM_000524	HTR1A	5-hydroxytryptamine (serotonin) receptor 1A
F04	Hs.123016	NM_000863	HTR1B	5-hydroxytryptamine (serotonin) receptor 1B
F05	Hs.121482	NM_000864	HTR1D	5-hydroxytryptamine (serotonin) receptor 1D
F06	Hs.248136	NM_000866	HTR1F	5-hydroxytryptamine (serotonin) receptor 1F
F07	Hs.654586	NM_000621	HTR2A	5-hydroxytryptamine (serotonin) receptor 2A
F08	Hs.149037	NM_000868	HTR2C	5-hydroxytryptamine (serotonin) receptor 2C
F09	Hs.413899	NM_000869	HTR3A	5-hydroxytryptamine (serotonin) receptor 3A
F10	Hs.483773	NM_000870	HTR4	5-hydroxytryptamine (serotonin) receptor 4
F11	Hs.73739	NM_000872	HTR7	5-hydroxytryptamine (serotonin) receptor 7 (adenylate cyclase-coupled)
F12	Hs.37125	NM_000910	NPY2R	Neuropeptide Y receptor Y2
G01	Hs.598503	NM_006174	NPY5R	Neuropeptide Y receptor Y5
G02	Hs.131138	NM_012344	NTSR2	Neurotensin receptor 2
G03	Hs.2820	NM_000916	OXTR	Oxytocin receptor
G04	Hs.375029	NM_144773	PROKR2	Prokineticin receptor 2
G05	Hs.42091	NM_002980	SCTR	Secretin receptor
G06	Hs.248160	NM_001049	SSTR1	Somatostatin receptor 1
G07	Hs.514451	NM_001050	SSTR2	Somatostatin receptor 2
G08	Hs.673846	NM_001052	SSTR4	Somatostatin receptor 4
G09	Hs.633301	NM_001058	TACR1	Tachykinin receptor 1
G10	Hs.88372	NM_001057	TACR2	Tachykinin receptor 2
G11	Hs.942	NM_001059	TACR3	Tachykinin receptor 3
G12	Hs.202	NM_000714	TSPO	Translocator protein (18kDa)
H01	Hs.520640	NM_001101	ACTB	Actin, beta
H02	Hs.534255	NM_004048	B2M	Beta-2-microglobulin
H03	Hs.592355	NM_002046	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
H04	Hs.412707	NM_000194	HPRT1	Hypoxanthine phosphoribosyltransferase 1
H05	Hs.546285	NM_001002	RPLP0	Ribosomal protein, large, P0
H06	N/A	SA_00105	HGDC	Human 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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