

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

Mouse Neurotransmitter Receptors

Cat. no. 330231 PAMM-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 Mouse 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 | Drd1a | Drd2 | Drd5 | Gabbr1 | Gabbr2 |
| C | Gabra1 | Gabra2 | Gabra4 | Gabra5 | Gabra6 | Gabrb1 | Gabrb3 | Gabrd | Gabre | Gabrg1 | Gabrg2 | Gabrg3 |
| D | Gabrq | Gabbr1 | Gabbr2 | Gcgr | Gria1 | Gria2 | Gria3 | Grik1 | Grik2 | Grik4 | Grik5 | Grin1 |
| E | Grin2a | Grin2b | Grin2c | Grm1 | Grm3 | Grm4 | Grm5 | Grm6 | Grm7 | Grm8 | Grpr | Hctr2 |
| F | Hrh1 | Hrh4 | Htr1a | Htr1b | Htr1d | Htr1f | Htr2a | Htr2b | Htr2c | Htr3a | Htr4 | Htr7 |
| G | Npy2r | Npy5r | Ntsr2 | Oxtr | Prokr2 | Sstr1 | Sstr2 | Sstr4 | Tacr1 | Tacr2 | Tacr3 | Tspo |
| 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.57064 | NM_013461 | Adra1a | Adrenergic receptor, alpha 1a |
| A02 | Mm.389380 | NM_013460 | Adra1d | Adrenergic receptor, alpha 1d |
| A03 | Mm.235195 | NM_007417 | Adra2a | Adrenergic receptor, alpha 2a |
| A04 | Mm.5598 | NM_007420 | Adrb2 | Adrenergic receptor, beta 2 |
| A05 | Mm.278475 | NM_013462 | Adrb3 | Adrenergic receptor, beta 3 |
| A06 | Mm.4351 | NM_016847 | Avpr1a | Arginine vasopressin receptor 1A |
| A07 | Mm.89986 | NM_011924 | Avpr1b | Arginine vasopressin receptor 1B |
| A08 | Mm.10687 | NM_009766 | Brs3 | Bombesin-like receptor 3 |
| A09 | Mm.44513 | NM_007627 | Cckbr | Cholecystokinin B receptor |
| A10 | Mm.240607 | NM_007698 | Chrm1 | Cholinergic receptor, muscarinic 1, CNS |
| A11 | Mm.330405 | NM_007699 | Chrm4 | Cholinergic receptor, muscarinic 4 |
| A12 | Mm.297624 | NM_205783 | Chrm5 | Cholinergic receptor, muscarinic 5 |
| B01 | Mm.63569 | NM_145129 | Chrna3 | Cholinergic receptor, nicotinic, alpha polypeptide 3 |
| B02 | Mm.252369 | NM_015730 | Chrna4 | Cholinergic receptor, nicotinic, alpha polypeptide 4 |
| B03 | Mm.103778 | NM_176844 | Chrna5 | Cholinergic receptor, nicotinic, alpha polypeptide 5 |
| B04 | Mm.283137 | NM_021369 | Chrna6 | Cholinergic receptor, nicotinic, alpha polypeptide 6 |
| B05 | Mm.113464 | NM_007390 | Chrna7 | Cholinergic receptor, nicotinic, alpha polypeptide 7 |
| B06 | Mm.4980 | NM_009603 | Chrne | Cholinergic receptor, nicotinic, epsilon polypeptide |
| B07 | Mm.7992 | NM_007726 | Cnr1 | Cannabinoid receptor 1 (brain) |
| B08 | Mm.54161 | NM_010076 | Drd1a | Dopamine receptor D1A |
| B09 | Mm.41970 | NM_010077 | Drd2 | Dopamine receptor D2 |
| B10 | Mm.167154 | NM_013503 | Drd5 | Dopamine receptor D5 |
| B11 | Mm.32191 | NM_019439 | Gabbr1 | Gamma-aminobutyric acid (GABA) B receptor, 1 |
| B12 | Mm.101909 | NM_001081141 | Gabbr2 | Gamma-aminobutyric acid (GABA) B receptor, 2 |
| C01 | Mm.439668 | NM_010250 | Gabra1 | Gamma-aminobutyric acid (GABA) A receptor, subunit alpha 1 |
| C02 | Mm.5304 | NM_008066 | Gabra2 | Gamma-aminobutyric acid (GABA) A receptor, subunit alpha 2 |
| C03 | Mm.248731 | NM_010251 | Gabra4 | Gamma-aminobutyric acid (GABA) A receptor, subunit alpha 4 |
| C04 | Mm.273114 | NM_176942 | Gabra5 | Gamma-aminobutyric acid (GABA) A receptor, subunit alpha 5 |
| C05 | Mm.4915 | NM_008068 | Gabra6 | Gamma-aminobutyric acid (GABA) A receptor, subunit alpha 6 |
| C06 | Mm.38567 | NM_008069 | Gabrb1 | Gamma-aminobutyric acid (GABA) A receptor, subunit beta 1 |
| C07 | Mm.8004 | NM_008071 | Gabrb3 | Gamma-aminobutyric acid (GABA) A receptor, subunit beta 3 |
| C08 | Mm.388925 | NM_008072 | Gabrd | Gamma-aminobutyric acid (GABA) A receptor, subunit delta |
| C09 | Mm.391288 | NM_017369 | Gabre | Gamma-aminobutyric acid (GABA) A receptor, subunit epsilon |
| C10 | Mm.255292 | NM_010252 | Gabrg1 | Gamma-aminobutyric acid (GABA) A receptor, subunit gamma 1 |
| C11 | Mm.5309 | NM_008073 | Gabrg2 | Gamma-aminobutyric acid (GABA) A receptor, subunit gamma 2 |
| C12 | Mm.378920 | NM_008074 | Gabrg3 | Gamma-aminobutyric acid (GABA) A receptor, subunit gamma 3 |
| D01 | Mm.117125 | NM_020488 | Gabrq | Gamma-aminobutyric acid (GABA) A receptor, subunit theta |
| D02 | Mm.14116 | NM_008075 | Gabbr1 | Gamma-aminobutyric acid (GABA) C receptor, subunit rho 1 |
| D03 | Mm.6227 | NM_008076 | Gabbr2 | Gamma-aminobutyric acid (GABA) C receptor, subunit rho 2 |
| D04 | Mm.22329 | NM_008101 | Gcgr | Glucagon receptor |
| D05 | Mm.4920 | NM_008165 | Gria1 | Glutamate receptor, ionotropic, AMPA1 (alpha 1) |
| D06 | Mm.220224 | NM_013540 | Gria2 | Glutamate receptor, ionotropic, AMPA2 (alpha 2) |
| D07 | Mm.327681 | NM_016886 | Gria3 | Glutamate receptor, ionotropic, AMPA3 (alpha 3) |
| D08 | Mm.5134 | NM_146072 | Grik1 | Glutamate receptor, ionotropic, kainate 1 |
| D09 | Mm.332838 | NM_010349 | Grik2 | Glutamate receptor, ionotropic, kainate 2 (beta 2) |

| Position | UniGene | GenBank | Symbol | Description |
|----------|-----------|--------------|----------|---|
| D10 | Mm.370291 | NM_175481 | Grik4 | Glutamate receptor, ionotropic, kainate 4 |
| D11 | Mm.2879 | NM_008168 | Grik5 | Glutamate receptor, ionotropic, kainate 5 (gamma 2) |
| D12 | Mm.278672 | NM_008169 | Grin1 | Glutamate receptor, ionotropic, NMDA1 (zeta 1) |
| E01 | Mm.2953 | NM_008170 | Grin2a | Glutamate receptor, ionotropic, NMDA2A (epsilon 1) |
| E02 | Mm.436649 | NM_008171 | Grin2b | Glutamate receptor, ionotropic, NMDA2B (epsilon 2) |
| E03 | Mm.39090 | NM_010350 | Grin2c | Glutamate receptor, ionotropic, NMDA2C (epsilon 3) |
| E04 | Mm.391904 | NM_016976 | Grm1 | Glutamate receptor, metabotropic 1 |
| E05 | Mm.318966 | NM_181850 | Grm3 | Glutamate receptor, metabotropic 3 |
| E06 | Mm.358940 | NM_001013385 | Grm4 | Glutamate receptor, metabotropic 4 |
| E07 | Mm.235018 | NM_001081414 | Grm5 | Glutamate receptor, metabotropic 5 |
| E08 | Mm.134265 | NM_173372 | Grm6 | Glutamate receptor, metabotropic 6 |
| E09 | Mm.240881 | NM_177328 | Grm7 | Glutamate receptor, metabotropic 7 |
| E10 | Mm.320732 | NM_008174 | Grm8 | Glutamate receptor, metabotropic 8 |
| E11 | Mm.4687 | NM_008177 | Grpr | Gastrin releasing peptide receptor |
| E12 | Mm.335300 | NM_198962 | Hcrtr2 | Hypocretin (orexin) receptor 2 |
| F01 | Mm.333327 | NM_008285 | Hrh1 | Histamine receptor H1 |
| F02 | Mm.207073 | NM_153087 | Hrh4 | Histamine receptor H4 |
| F03 | Mm.4716 | NM_008308 | Htr1a | 5-hydroxytryptamine (serotonin) receptor 1A |
| F04 | Mm.445308 | NM_010482 | Htr1b | 5-hydroxytryptamine (serotonin) receptor 1B |
| F05 | Mm.40573 | NM_008309 | Htr1d | 5-hydroxytryptamine (serotonin) receptor 1D |
| F06 | Mm.5040 | NM_008310 | Htr1f | 5-hydroxytryptamine (serotonin) receptor 1F |
| F07 | Mm.214351 | NM_172812 | Htr2a | 5-hydroxytryptamine (serotonin) receptor 2A |
| F08 | Mm.439747 | NM_008311 | Htr2b | 5-hydroxytryptamine (serotonin) receptor 2B |
| F09 | Mm.439670 | NM_008312 | Htr2c | 5-hydroxytryptamine (serotonin) receptor 2C |
| F10 | Mm.4831 | NM_013561 | Htr3a | 5-hydroxytryptamine (serotonin) receptor 3A |
| F11 | Mm.20440 | NM_008313 | Htr4 | 5 hydroxytryptamine (serotonin) receptor 4 |
| F12 | Mm.254266 | NM_008315 | Htr7 | 5-hydroxytryptamine (serotonin) receptor 7 |
| G01 | Mm.1433 | NM_008731 | Npy2r | Neuropeptide Y receptor Y2 |
| G02 | Mm.10685 | NM_016708 | Npy5r | Neuropeptide Y receptor Y5 |
| G03 | Mm.281715 | NM_008747 | Ntsr2 | Neurotensin receptor 2 |
| G04 | Mm.333310 | NM_001081147 | Oxtr | Oxytocin receptor |
| G05 | Mm.283777 | NM_144944 | Prokr2 | Prokineticin receptor 2 |
| G06 | Mm.278336 | NM_009216 | Sstr1 | Somatostatin receptor 1 |
| G07 | Mm.454968 | NM_009217 | Sstr2 | Somatostatin receptor 2 |
| G08 | Mm.35324 | NM_009219 | Sstr4 | Somatostatin receptor 4 |
| G09 | Mm.8055 | NM_009313 | Tacr1 | Tachykinin receptor 1 |
| G10 | Mm.8054 | NM_009314 | Tacr2 | Tachykinin receptor 2 |
| G11 | Mm.103810 | NM_021382 | Tacr3 | Tachykinin receptor 3 |
| G12 | Mm.1508 | NM_009775 | Tspo | Translocator protein |
| 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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