RT² Profiler PCR Array (Rotor-Gene® Format)

Mouse Huntington's Disease

Cat. no. 330231 PAMM-123ZR

For pathway expression analysis

Format	For use with the following real-time cyclers
RT² Profiler PCR Array, Format R	Rotor-Gene Q, other Rotor-Gene cyclers

Description

The Mouse Huntington's Disease RT² Profiler™ PCR Array profiles the expression of 84 key genes directly or potentially involved in Huntington's disease (HD). HD, an autosomal dominant genetic disorder caused by expanded CAG repeats in the Huntingtin (HTT) gene, patients present with progressive neuronal dysfunction, and eventually death. HTT interacts with multiple transcription factors (e.g. REST and SP1). HTT mutations have multiple effects, including loss of anti-apoptotic function as well as altered interactions between HTT and transcription factors, affecting downstream expression of target genes. For example, HTT sequesters REST in the cytoplasm. Mutant HTT's decreased interaction with REST allows the transcription factor to enter the nucleus and repress BDNF gene expression. BDNF is critical for striatal neuron survival, and its down-regulation leads to neuronal death.
Microarray gene expression analyses of human cadavers and mouse HD models have identified many genes that may be involved in HD progression. Analysis of these dysregulated genes in your model system may provide insights into HD pathophysiological mechanisms and suggestions for new therapeutic targets. This array includes known HTT cofactors and downstream interactors, as well as SP1 and REST targets whose expression changes correlate across multiple HD microarray analyses. Using real-time PCR, you can easily and reliably analyze the expression of a focused panel of genes central to Huntington's disease progression with this array.

For further details, consult the *RT² Profiler PCR Array Handbook*.

Shipping and storage

RT² Profiler PCR Arrays in the Rotor-Gene format are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products.

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

The 96 real-time assays in the Rotor-Gene format are located in wells 1–96 of the Rotor-Disc™ (plate A1–A12=Rotor-Disc 1–12, plate B1–B12=Rotor-Disc 13–24, etc.). To maintain data analysis compatibility, wells 97–100 do not contain real-time assays but will contain master mix to account for weight balance.

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Mm.6645	NM_009652	Akt1	Thymoma viral proto-oncogene 1
A02	Mm.305152	NM_009696	Apoe	Apolipoprotein E
A03	Mm.18625	NM_007472	Aqp1	Aquaporin 1
A04	Mm.41637	NM_029802	Arfip2	ADP-ribosylation factor interacting protein 2
A05	Mm.321755	NM_009723	Atp2b2	ATPase, Ca++ transporting, plasma membrane 2
A06	Mm.19904	NM_007527	Bax	Bcl2-associated X protein
A07	Mm.27335	NM_130452	Bbox1	Butyrobetaine (gamma), 2-oxoglutarate dioxygenase 1 (gamma-butyrobetaine hydroxylase)
A08	Mm.1442	NM_007540	Bdnf	Brain derived neurotrophic factor
A09	Mm.19131	NM_009778	C3	Complement component 3
A10	Mm.277665	NM_009788	Calb1	Calbindin 1
A11	Mm.34405	NM_009810	Casp3	Caspase 3
A12	Mm.336851	NM_009812	Casp8	Caspase 8
B01	Mm.423621	NM_009851	Cd44	CD44 antigen
B02	Mm.479526	NM_001003908	Cltc	Clathrin, heavy polypeptide (Hc)
B03	Mm.7992	NM_007726	Cnr1	Cannabinoid receptor 1 (brain)
B04	Mm.453295	NM_133828	Creb1	CAMP responsive element binding protein 1
B05	Mm.132238	NM_001025432	Crebbp	CREB binding protein
B06	Mm.6919	NM_007835	Dctn1	Dynactin 1
B07	Mm.27256	NM_007864	Dlg4	Discs, large homolog 4 (Drosophila)
B08	Mm.2645	NM_007906	Eef1a2	Eukaryotic translation elongation factor 1 alpha 2
B09	Mm.8534	NM_007912	Egfr	Epidermal growth factor receptor
B10	Mm.342392	NM_198093	Elmo1	Engulfment and cell motility 1, ced-12 homolog (C. elegans)
B11	Mm.7996	NM_010199	Fgf12	Fibroblast growth factor 12
B12	Mm.388925	NM_008072	Gabrd	Gamma-aminobutyric acid (GABA) A receptor, subunit delta
C01	Mm.378921	NM_010288	Gja1	Gap junction protein, alpha 1
C02	Mm.25652	NM_008128	Gjb6	Gap junction protein, beta 6
C03	Mm.439701	NM_008139	Gnaq	Guanine nucleotide binding protein, alpha q polypeptide
C04	Mm.1090	NM_008160	Gpx1	Glutathione peroxidase 1
C05	Mm.439649	NM_008163	Grb2	Growth factor receptor bound protein 2
C06	Mm.2953	NM_008170	Grin2a	Glutamate receptor, ionotropic, NMDA2A (epsilon 1)
C07	Mm.436649	NM_008171	Grin2b	Glutamate receptor, ionotropic, NMDA2B (epsilon 2)
C08	Mm.235018	NM_001081414	Grm5	Glutamate receptor, metabotropic 5
C09	Mm.281700	NM_010404	Hap1	Huntingtin-associated protein 1
C10	Mm.202504	NM_008228	Hdac1	Histone deacetylase 1
C11	Mm.19806	NM_008229	Hdac2	Histone deacetylase 2
C12	Mm.280805	NM_146001	Hip1	Huntingtin interacting protein 1
D01	Mm.37533	NM_152134	Homer1	Homer homolog 1 (Drosophila)
D02	Mm.384452	NM_010471	Hpca	Hippocalcin
D03	Mm.209071	NM_010414	Htt	Huntingtin
D04	Mm.241276	NM_028680	Ift57	Intraflagellar transport 57 homolog (Chlamydomonas)
D05	Mm.268521	NM_010512	Igf1	Insulin-like growth factor 1
D06	Mm.227912	NM_010585	Itpr1	Inositol 1,4,5-trisphosphate receptor 1
D07	Mm.316402	NM_010597	Kcnab1	Potassium voltage-gated channel, shaker-related subfamily, beta member 1
D08	Mm.388924	NM_010598	Kcnab2	Potassium voltage-gated channel, shaker-related subfamily, beta member 2
D09	Mm.40312	NM_008422	Kcnc3	Potassium voltage gated channel, Shaw-related subfamily, member 3
D10	Mm.1514	NM_008509	Lpl	Lipoprotein lipase
D11	Mm.389883	NM_001081292	Map3k10	Mitogen-activated protein kinase kinase kinase 10
D12	Mm.271814	NM_011308	Ncor1	Nuclear receptor co-repressor 1
E01	Mm.1956	NM_010910	Nefl	Neurofilament, light polypeptide
E02	Mm.435439	NM_019867	Ngef	Neuronal guanine nucleotide exchange factor
E03	Mm.130054	NM_008745	Ntrk2	Neurotrophic tyrosine kinase, receptor, type 2
E04	Mm.4926	NM_011861	Pacsin1	Protein kinase C and casein kinase substrate in neurons 1
E05	Mm.336205	NM_008828	Pgk1	Phosphoglycerate kinase 1
E06	Mm.38009	NM_013829	Plcb4	Phospholipase C, beta 4
E07	Mm.79983	NM_011961	Plod2	Procollagen lysine, 2-oxoglutarate 5-dioxygenase 2
E08	Mm.259072	NM_008904	Ppargc1a	Peroxisome proliferative activated receptor, gamma, coactivator 1 alpha

Position	UniGene	GenBank	Symbol	Description
E09	Mm.331389	NM_008913	Ppp3ca	Protein phosphatase 3, catalytic subunit, alpha isoform
E10	Mm.207496	NM_008855	Prkcb	Protein kinase C, beta
E11	Mm.257474	NM_018785	Prpf40a	PRP40 pre-mRNA processing factor 40 homolog A (yeast)
E12	Mm.8681	NM_011202	Ptpn11	Protein tyrosine phosphatase, non-receptor type 11
F01	Mm.28650	NM_024287	Rab6	RAB6, member RAS oncogene family
F02	Mm.23808	NM_198023	Rcor1	REST corepressor 1
F03	Mm.28840	NM_011263	Rest	RE1-silencing transcription factor
F04	Mm.41642	NM_009062	Rgs4	Regulator of G-protein signaling 4
F05	Mm.41416	NM_001029938	Rilp	Rab interacting lysosomal protein
F06	Mm.181166	NM_011286	Rph3a	Rabphilin 3A
F07	Mm.1243	NM_011306	Rxrb	Retinoid X receptor beta
F08	Mm.28405	NM_011361	Sgk1	Serum/glucocorticoid regulated kinase 1
F09	Mm.15755	NM_011378	Sin3a	Transcriptional regulator, SIN3A (yeast)
F10	Mm.33832	NM_028122	Slc14a1	Solute carrier family 14 (urea transporter), member 1
F11	Mm.16228	NM_007450	Slc25a4	Solute carrier family 25 (mitochondrial carrier, adenine nucleotide translocator), member 4
F12	Mm.45953	NM_011428	Snap25	Synaptosomal-associated protein 25
G01	Mm.276325	NM_011434	Sod1	Superoxide dismutase 1, soluble
G02	Mm.65396	NM_011443	Sox2	SRY-box containing gene 2
G03	Mm.4618	NM_013672	Sp1	Trans-acting transcription factor 1
G04	Mm.130902	NM_026605	Sympk	Symplekin
G05	Mm.439844	NM_013680	Syn1	Synapsin I
G06	Mm.1440	NM_009311	Tac1	Tachykinin 1
G07	Mm.244820	NM_013684	Tbp	TATA box binding protein
G08	Mm.330731	NM_009373	Tgm2	Transglutaminase 2, C polypeptide
G09	Mm.103551	NM_023764	Tollip	Toll interacting protein
G10	Mm.222	NM_011640	Trp53	Transformation related protein 53
G11	Mm.273538	NM_011655	Tubb5	Tubulin, beta 5
G12	Mm.457803	NM_001033324	Zbtb16	Zinc finger and BTB domain containing 16
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.
RT² First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT² SYBR Green ROX™ FAST Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the Rotor-Gene Q and other Rotor-Gene cyclers	330620

* 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.

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at www.qiagen.com or can be requested from QIAGEN Technical Services or your local distributor.

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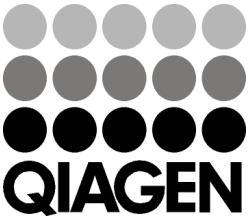

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