

# RT<sup>2</sup> Profiler PCR Array (Rotor-Gene® Format)

## Mouse Neuronal Ion Channels

Cat. no. 330231 PAMM-036ZR

For pathway expression analysis

Format	For use with the following real-time cyclers
RT <sup>2</sup> Profiler PCR Array, Format R	Rotor-Gene Q, other Rotor-Gene cyclers

### Description

The Mouse Neuronal Ion Channels RT<sup>2</sup> Profiler PCR Array was developed to profile expression of a panel of 84 genes encoding neuroscience-related ion channels and transporters. The genes represented on the array are listed below, grouped according to their functional and structural features. Included are calcium channels, potassium channels, sodium channels, chloride channels, and transporters. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to the neuronal ion channels and transporters with this array.

For further details, consult the *RT<sup>2</sup> Profiler PCR Array Handbook*.

### Shipping and storage

RT<sup>2</sup> 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 RT<sup>2</sup> 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: RT<sup>2</sup> Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Mm.234998	NM_007384	Accn1	Amiloride-sensitive cation channel 1, neuronal (degenerin)
A02	Mm.440107	NM_009597	Accn2	Amiloride-sensitive cation channel 2, neuronal
A03	Mm.299636	NM_183000	Accn3	Amiloride-sensitive cation channel 3
A04	Mm.31577	NM_011913	Best1	Bestrophin 1
A05	Mm.334658	NM_007578	Cacna1a	Calcium channel, voltage-dependent, P/Q type, alpha 1A subunit
A06	Mm.4424	NM_007579	Cacna1b	Calcium channel, voltage-dependent, N type, alpha 1B subunit
A07	Mm.436656	NM_009781	Cacna1c	Calcium channel, voltage-dependent, L type, alpha 1C subunit
A08	Mm.9772	NM_028981	Cacna1d	Calcium channel, voltage-dependent, L type, alpha 1D subunit
A09	Mm.29585	NM_009783	Cacna1g	Calcium channel, voltage-dependent, T type, alpha 1G subunit
A10	Mm.291058	NM_001044308	Cacna1i	Calcium channel, voltage-dependent, alpha 1I subunit
A11	Mm.41252	NM_031173	Cacnb1	Calcium channel, voltage-dependent, beta 1 subunit
A12	Mm.313930	NM_023116	Cacnb2	Calcium channel, voltage-dependent, beta 2 subunit
B01	Mm.3544	NM_007581	Cacnb3	Calcium channel, voltage-dependent, beta 3 subunit
B02	Mm.277338	NM_007583	Cacng2	Calcium channel, voltage-dependent, gamma subunit 2
B03	Mm.103724	NM_019431	Cacng4	Calcium channel, voltage-dependent, gamma subunit 4
B04	Mm.177761	NM_009900	Clcn2	Chloride channel 2
B05	Mm.259751	NM_007711	Clcn3	Chloride channel 3
B06	Mm.270587	NM_011930	Clcn7	Chloride channel 7
B07	Mm.343429	NM_010408	Hcn1	Hyperpolarization-activated, cyclic nucleotide-gated K+ 1
B08	Mm.12956	NM_008226	Hcn2	Hyperpolarization-activated, cyclic nucleotide-gated K+ 2
B09	Mm.40424	NM_010595	Kcna1	Potassium voltage-gated channel, shaker-related subfamily, member 1
B10	Mm.56930	NM_008417	Kcna2	Potassium voltage-gated channel, shaker-related subfamily, member 2
B11	Mm.222831	NM_145983	Kcna5	Potassium voltage-gated channel, shaker-related subfamily, member 5
B12	Mm.62535	NM_013568	Kcna6	Potassium voltage-gated channel, shaker-related, subfamily, member 6
C01	Mm.316402	NM_010597	Kcnab1	Potassium voltage-gated channel, shaker-related subfamily, beta member 1
C02	Mm.388924	NM_010598	Kcnab2	Potassium voltage-gated channel, shaker-related subfamily, beta member 2
C03	Mm.232472	NM_010599	Kcnab3	Potassium voltage-gated channel, shaker-related subfamily, beta member 3
C04	Mm.387390	NM_008420	Kcnb1	Potassium voltage gated channel, Shab-related subfamily, member 1
C05	Mm.156081	NM_001098528	Kcnb2	Potassium voltage gated channel, Shab-related subfamily, member 2
C06	Mm.249386	NM_008421	Kcnc1	Potassium voltage gated channel, Shaw-related subfamily, member 1
C07	Mm.336242	NM_001025581	Kcnc2	Potassium voltage gated channel, Shaw-related subfamily, member 2
C08	Mm.320691	NM_019697	Kcnd2	Potassium voltage-gated channel, Shal-related family, member 2
C09	Mm.44530	NM_019931	Kcnd3	Potassium voltage-gated channel, Shal-related family, member 3
C10	Mm.4489	NM_010600	Kcnh1	Potassium voltage-gated channel, subfamily H (eag-related), member 1
C11	Mm.6539	NM_013569	Kcnh2	Potassium voltage-gated channel, subfamily H (eag-related), member 2
C12	Mm.374793	NM_010601	Kcnh3	Potassium voltage-gated channel, subfamily H (eag-related), member 3
D01	Mm.343850	NM_001037712	Kcnh6	Potassium voltage-gated channel, subfamily H (eag-related), member 6
D02	Mm.242532	NM_133207	Kcnh7	Potassium voltage-gated channel, subfamily H (eag-related), member 7
D03	Mm.390168	NM_019659	Kcnj1	Potassium inwardly-rectifying channel, subfamily J, member 1
D04	Mm.333863	NM_010602	Kcnj11	Potassium inwardly rectifying channel, subfamily J, member 11
D05	Mm.4970	NM_010603	Kcnj12	Potassium inwardly-rectifying channel, subfamily J, member 12
D06	Mm.443539	NM_001110227	Kcnj13	Potassium inwardly-rectifying channel, subfamily J, member 13
D07	Mm.68170	NM_145963	Kcnj14	Potassium inwardly-rectifying channel, subfamily J, member 14
D08	Mm.272239	NM_019664	Kcnj15	Potassium inwardly-rectifying channel, subfamily J, member 15
D09	Mm.30176	NM_010604	Kcnj16	Potassium inwardly-rectifying channel, subfamily J, member 16
D10	Mm.4951	NM_008425	Kcnj2	Potassium inwardly-rectifying channel, subfamily J, member 2
D11	Mm.5127	NM_008426	Kcnj3	Potassium inwardly-rectifying channel, subfamily J, member 3
D12	Mm.140760	NM_008427	Kcnj4	Potassium inwardly-rectifying channel, subfamily J, member 4
E01	Mm.69472	NM_010605	Kcnj5	Potassium inwardly-rectifying channel, subfamily J, member 5
E02	Mm.328720	NM_010606	Kcnj6	Potassium inwardly-rectifying channel, subfamily J, member 6
E03	Mm.261168	NM_008429	Kcnj9	Potassium inwardly-rectifying channel, subfamily J, member 9
E04	Mm.10800	NM_008430	Kcnk1	Potassium channel, subfamily K, member 1
E05	Mm.343607	NM_010610	Kcnma1	Potassium large conductance calcium-activated channel, subfamily M, alpha member 1
E06	Mm.440652	NM_021452	Kcnmb4	Potassium large conductance calcium-activated channel, subfamily M, beta member 4
				Potassium intermediate/small conductance calcium-activated channel, subfamily

Position	UniGene	GenBank	Symbol	Description
E07	Mm.32074	NM_032397	Kcnn1	N, member 1
E08	Mm.458654	NM_080465	Kcnn2	Potassium intermediate/small conductance calcium-activated channel, subfamily N, member 2
E09	Mm.120250	NM_080466	Kcnn3	Potassium intermediate/small conductance calcium-activated channel, subfamily N, member 3
E10	Mm.439769	NM_008434	Kcnq1	Potassium voltage-gated channel, subfamily Q, member 1
E11	Mm.40615	NM_010611	Kcnq2	Potassium voltage-gated channel, subfamily Q, member 2
E12	Mm.255585	NM_152923	Kcnq3	Potassium voltage-gated channel, subfamily Q, member 3
F01	Mm.6217	NM_008435	Kcns1	K+ voltage-gated channel, subfamily S, 1
F02	Mm.436657	NM_177652	Ryr3	Ryanodine receptor 3
F03	Mm.247042	NM_009134	Scn10a	Sodium channel, voltage-gated, type X, alpha
F04	Mm.89981	NM_011887	Scn11a	Sodium channel, voltage-gated, type XI, alpha
F05	Mm.439704	NM_018733	Scn1a	Sodium channel, voltage-gated, type I, alpha
F06	Mm.1418	NM_011322	Scn1b	Sodium channel, voltage-gated, type I, beta
F07	Mm.220329	NM_001099298	Scn2a1	Sodium channel, voltage-gated, type II, alpha 1
F08	Mm.229373	NM_001014761	Scn2b	Sodium channel, voltage-gated, type II, beta
F09	Mm.330256	NM_018732	Scn3a	Sodium channel, voltage-gated, type III, alpha
F10	Mm.385012	NM_001077499	Scn8a	Sodium channel, voltage-gated, type VIII, alpha
F11	Mm.440889	NM_018852	Scn9a	Sodium channel, voltage-gated, type IX, alpha
F12	Mm.252987	NM_020333	Slc12a5	Solute carrier family 12, member 5
G01	Mm.186329	NM_177781	Trpa1	Transient receptor potential cation channel, subfamily A, member 1
G02	Mm.149633	NM_011643	Trpc1	Transient receptor potential cation channel, subfamily C, member 1
G03	Mm.74363	NM_019510	Trpc3	Transient receptor potential cation channel, subfamily C, member 3
G04	Mm.325086	NM_013838	Trpc6	Transient receptor potential cation channel, subfamily C, member 6
G05	Mm.38875	NM_001039104	Trpm1	Transient receptor potential cation channel, subfamily M, member 1
G06	Mm.276762	NM_138301	Trpm2	Transient receptor potential cation channel, subfamily M, member 2
G07	Mm.215171	NM_153417	Trpm6	Transient receptor potential cation channel, subfamily M, member 6
G08	Mm.218753	NM_134252	Trpm8	Transient receptor potential cation channel, subfamily M, member 8
G09	Mm.447485	NM_001001445	Trpv1	Transient receptor potential cation channel, subfamily V, member 1
G10	Mm.288064	NM_011706	Trpv2	Transient receptor potential cation channel, subfamily V, member 2
G11	Mm.347652	NM_145099	Trpv3	Transient receptor potential cation channel, subfamily V, member 3
G12	Mm.266450	NM_022017	Trpv4	Transient receptor potential cation channel, subfamily V, member 4
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, RT<sup>2</sup> Profiler PCR Arrays should be used together with the RT<sup>2</sup> First Strand Kit for cDNA synthesis and RT<sup>2</sup> SYBR<sup>®</sup> Green qPCR Mastermixes for PCR.

Product	Contents	Cat. no.
RT <sup>2</sup> First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT <sup>2</sup> SYBR Green ROX <sup>™</sup> 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.

RT<sup>2</sup> 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](http://www.qiagen.com) or can be requested from QIAGEN Technical Services or your local distributor.

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