RT² Profiler PCR Array (Rotor-Gene® Format)

Human Neuronal Ion Channels

Cat. no. 330231 PAHS-036ZR

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 Human Neuronal Ion Channels RT² 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 *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	Hs.368417	NM_001094	ACCN1	Amiloride-sensitive cation channel 1, neuronal
A02	Hs.274361	NM_020039	ACCN2	Amiloride-sensitive cation channel 2, neuronal
A03	Hs.647113	NM_004769	ACCN3	Amiloride-sensitive cation channel 3
A04	Hs.524910	NM_004183	BEST1	Bestrophin 1
A05	Hs.501632	NM_000068	CACNA1A	Calcium channel, voltage-dependent, P/Q type, alpha 1A subunit
A06	Hs.495522	NM_000718	CACNA1B	Calcium channel, voltage-dependent, N type, alpha 1B subunit
A07	Hs.118262	NM_000719	CACNA1C	Calcium channel, voltage-dependent, L type, alpha 1C subunit
A08	Hs.476358	NM_000720	CACNA1D	Calcium channel, voltage-dependent, L type, alpha 1D subunit
A09	Hs.591169	NM_198397	CACNA1G	Calcium channel, voltage-dependent, T type, alpha 1G subunit
A10	Hs.125116	NM_021096	CACNA1I	Calcium channel, voltage-dependent, T type, alpha 1I subunit
A11	Hs.635	NM_000723	CACNB1	Calcium channel, voltage-dependent, beta 1 subunit
A12	Hs.709353	NM_000724	CACNB2	Calcium channel, voltage-dependent, beta 2 subunit
B01	Hs.250712	NM_000725	CACNB3	Calcium channel, voltage-dependent, beta 3 subunit
B02	Hs.670146	NM_006078	CACNG2	Calcium channel, voltage-dependent, gamma subunit 2
B03	Hs.514423	NM_014405	CACNG4	Calcium channel, voltage-dependent, gamma subunit 4
B04	Hs.436847	NM_004366	CLCN2	Chloride channel 2
B05	Hs.481186	NM_001829	CLCN3	Chloride channel 3
B06	Hs.459649	NM_001287	CLCN7	Chloride channel 7
B07	Hs.650434	NM_021072	HCN1	Hyperpolarization activated cyclic nucleotide-gated potassium channel 1
B08	Hs.124161	NM_001194	HCN2	Hyperpolarization activated cyclic nucleotide-gated potassium channel 2
B09	Hs.416139	NM_000217	KCNA1	Potassium voltage-gated channel, shaker-related subfamily, member 1 (episodic ataxia with myokymia)
B10	Hs.248139	NM_004974	KCNA2	Potassium voltage-gated channel, shaker-related subfamily, member 2
B11	Hs.150208	NM_002234	KCNA5	Potassium voltage-gated channel, shaker-related subfamily, member 5
B12	Hs.306190	NM_002235	KCNA6	Potassium voltage-gated channel, shaker-related subfamily, member 6
C01	Hs.654519	NM_003471	KCNAB1	Potassium voltage-gated channel, shaker-related subfamily, beta member 1
C02	Hs.440497	NM_003636	KCNAB2	Potassium voltage-gated channel, shaker-related subfamily, beta member 2
C03	Hs.435074	NM_004732	KCNAB3	Potassium voltage-gated channel, shaker-related subfamily, beta member 3
C04	Hs.84244	NM_004975	KCNB1	Potassium voltage-gated channel, Shab-related subfamily, member 1
C05	Hs.661102	NM_004770	KCNB2	Potassium voltage-gated channel, Shab-related subfamily, member 2
C06	Hs.552896	NM_004976	KCNC1	Potassium voltage-gated channel, Shaw-related subfamily, member 1
C07	Hs.27214	NM_139137	KCNC2	Potassium voltage-gated channel, Shaw-related subfamily, member 2
C08	Hs.654739	NM_012281	KCND2	Potassium voltage-gated channel, Shal-related subfamily, member 2
C09	Hs.666367	NM_004980	KCND3	Potassium voltage-gated channel, Shal-related subfamily, member 3
C10	Hs.553187	NM_002238	KCNH1	Potassium voltage-gated channel, subfamily H (eag-related), member 1
C11	Hs.647099	NM_000238	KCNH2	Potassium voltage-gated channel, subfamily H (eag-related), member 2
C12	Hs.64064	NM_012284	KCNH3	Potassium voltage-gated channel, subfamily H (eag-related), member 3
D01	Hs.591177	NM_173092	KCNH6	Potassium voltage-gated channel, subfamily H (eag-related), member 6
D02	Hs.730187	NM_173162	KCNH7	Potassium voltage-gated channel, subfamily H (eag-related), member 7
D03	Hs.527830	NM_000220	KCNJ1	Potassium inwardly-rectifying channel, subfamily J, member 1
D04	Hs.248141	NM_000525	KCNJ11	Potassium inwardly-rectifying channel, subfamily J, member 11
D05	Hs.200629	NM_021012	KCNJ12	Potassium inwardly-rectifying channel, subfamily J, member 12
D06	Hs.467338	NM_002242	KCNJ13	Potassium inwardly-rectifying channel, subfamily J, member 13
D07	Hs.590945	NM_013348	KCNJ14	Potassium inwardly-rectifying channel, subfamily J, member 14
D08	Hs.411299	NM_002243	KCNJ15	Potassium inwardly-rectifying channel, subfamily J, member 15
D09	Hs.463985	NM_018658	KCNJ16	Potassium inwardly-rectifying channel, subfamily J, member 16
D10	Hs.1547	NM_000891	KCNJ2	Potassium inwardly-rectifying channel, subfamily J, member 2
D11	Hs.591606	NM_002239	KCNJ3	Potassium inwardly-rectifying channel, subfamily J, member 3
D12	Hs.32505	NM_004981	KCNJ4	Potassium inwardly-rectifying channel, subfamily J, member 4
E01	Hs.632109	NM_000890	KCNJ5	Potassium inwardly-rectifying channel, subfamily J, member 5
E02	Hs.658533	NM_002240	KCNJ6	Potassium inwardly-rectifying channel, subfamily J, member 6
E03	Hs.66726	NM_004983	KCNJ9	Potassium inwardly-rectifying channel, subfamily J, member 9
E04	Hs.208544	NM_002245	KCNK1	Potassium channel, subfamily K, member 1
E05	Hs.144795	NM_002247	KCNMA1	Potassium large conductance calcium-activated channel, subfamily M, alpha member 1
E06	Hs.525529	NM_014505	KCNMB4	Potassium large conductance calcium-activated channel, subfamily M, beta member 4

Position	UniGene	GenBank	Symbol	Description
E07	Hs.158173	NM_002248	KCNN1	Potassium intermediate/small conductance calcium-activated channel, subfamily N, member 1
E08	Hs.98280	NM_021614	KCNN2	Potassium intermediate/small conductance calcium-activated channel, subfamily N, member 2
E09	Hs.490765	NM_002249	KCNN3	Potassium intermediate/small conductance calcium-activated channel, subfamily N, member 3
E10	Hs.95162	NM_000218	KCNQ1	Potassium voltage-gated channel, KQT-like subfamily, member 1
E11	Hs.161851	NM_004518	KCNQ2	Potassium voltage-gated channel, KQT-like subfamily, member 2
E12	Hs.374023	NM_004519	KCNQ3	Potassium voltage-gated channel, KQT-like subfamily, member 3
F01	Hs.117780	NM_002251	KCNS1	Potassium voltage-gated channel, delayed-rectifier, subfamily S, member 1
F02	Hs.709373	NM_001036	RYR3	Ryanodine receptor 3
F03	Hs.250443	NM_006514	SCN10A	Sodium channel, voltage-gated, type X, alpha subunit
F04	Hs.591657	NM_014139	SCN11A	Sodium channel, voltage-gated, type XI, alpha subunit
F05	Hs.22654	NM_006920	SCN1A	Sodium channel, voltage-gated, type I, alpha subunit
F06	Hs.436646	NM_001037	SCN1B	Sodium channel, voltage-gated, type I, beta
F07	Hs.93485	NM_021007	SCN2A	Sodium channel, voltage-gated, type II, alpha subunit
F08	Hs.129783	NM_004588	SCN2B	Sodium channel, voltage-gated, type II, beta
F09	Hs.435274	NM_006922	SCN3A	Sodium channel, voltage-gated, type III, alpha subunit
F10	Hs.710638	NM_014191	SCN8A	Sodium channel, voltage gated, type VIII, alpha subunit
F11	Hs.439145	NM_002977	SCN9A	Sodium channel, voltage-gated, type IX, alpha subunit
F12	Hs.21413	NM_020708	SLC12A5	Solute carrier family 12 (potassium/chloride transporter), member 5
G01	Hs.667156	NM_007332	TRPA1	Transient receptor potential cation channel, subfamily A, member 1
G02	Hs.250687	NM_003304	TRPC1	Transient receptor potential cation channel, subfamily C, member 1
G03	Hs.150981	NM_003305	TRPC3	Transient receptor potential cation channel, subfamily C, member 3
G04	Hs.159003	NM_004621	TRPC6	Transient receptor potential cation channel, subfamily C, member 6
G05	Hs.155942	NM_002420	TRPM1	Transient receptor potential cation channel, subfamily M, member 1
G06	Hs.369759	NM_003307	TRPM2	Transient receptor potential cation channel, subfamily M, member 2
G07	Hs.272225	NM_017662	TRPM6	Transient receptor potential cation channel, subfamily M, member 6
G08	Hs.366053	NM_024080	TRPM8	Transient receptor potential cation channel, subfamily M, member 8
G09	Hs.655380	NM_018727	TRPV1	Transient receptor potential cation channel, subfamily V, member 1
G10	Hs.279746	NM_016113	TRPV2	Transient receptor potential cation channel, subfamily V, member 2
G11	Hs.446255	NM_145068	TRPV3	Transient receptor potential cation channel, subfamily V, member 3
G12	Hs.506713	NM_021625	TRPV4	Transient receptor potential cation channel, subfamily V, member 4
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.
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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