

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

## Mouse Hedgehog Signaling Pathway

Cat. no. 330231 PAMM-078ZR

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 Hedgehog Signaling RT<sup>2</sup> Profiler PCR Array profiles the expression of 84 key genes involved in the hedgehog signaling pathway. The hedgehog family members, including Sonic hedgehog (Shh), are the most well-known morphogens involved in the developmental pattern formation of various organs, such as the nervous system, muscle, the heart and the lungs. Hedgehog signaling has also been implicated in the development of several Mouse cancers. The array includes hedgehog family members, hedgehog receptors, and other associated proteins. The array also includes key genes involved in cell differentiation and multi-cellular organism development. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to hedgehog signaling 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.257460	NM_009741	Bcl2	B-cell leukemia/lymphoma 2
A02	Mm.103205	NM_007553	Bmp2	Bone morphogenetic protein 2
A03	Mm.6813	NM_007554	Bmp4	Bone morphogenetic protein 4
A04	Mm.428950	NM_007555	Bmp5	Bone morphogenetic protein 5
A05	Mm.385759	NM_007556	Bmp6	Bone morphogenetic protein 6
A06	Mm.595	NM_007557	Bmp7	Bone morphogenetic protein 7
A07	Mm.439749	NM_007558	Bmp8a	Bone morphogenetic protein 8a
A08	Mm.439764	NM_007559	Bmp8b	Bone morphogenetic protein 8b
A09	Mm.41561	NM_172506	Boc	Biregional cell adhesion molecule-related/down-regulated by oncogenes (Cdon) binding protein
A10	Mm.119717	NM_009771	Btrc	Beta-transducin repeat containing protein
A11	Mm.80509	NM_021339	Cdon	Cell adhesion molecule-related/down-regulated by oncogenes
A12	Mm.26908	NM_146087	Csnk1a1	Casein kinase 1, alpha 1
B01	Mm.30199	NM_013767	Csnk1e	Casein kinase 1, epsilon
B02	Mm.291928	NM_007614	Cttnb1	Catenin (cadherin associated protein), beta 1
B03	Mm.324688	NM_007857	Dhh	Desert hedgehog
B04	Mm.358721	NM_026866	Disp1	Dispatched homolog 1 (Drosophila)
B05	Mm.221499	NM_170593	Disp2	Dispatched homolog 2 (Drosophila)
B06	Mm.442420	NM_010154	ErbB4	V-erb-a erythroblastic leukemia viral oncogene homolog 4 (avian)
B07	Mm.316210	NM_183221	Fat4	FAT tumor suppressor homolog 4 (Drosophila)
B08	Mm.28017	NM_134015	Fbxw11	F-box and WD-40 domain protein 11
B09	Mm.8846	NM_013518	Fgf9	Fibroblast growth factor 9
B10	Mm.6904	NM_008010	Fgfr3	Fibroblast growth factor receptor 3
B11	Mm.141864	NM_010223	Fkbp8	FK506 binding protein 8
B12	Mm.354634	NM_183298	Foxe1	Forkhead box E1
C01	Mm.2962	NM_028127	Frmd6	FERM domain containing 6
C02	Mm.22701	NM_008086	Gas1	Growth arrest specific 1
C03	Mm.391450	NM_010296	Gli1	GLI-Kruppel family member GLI1
C04	Mm.273292	NM_001081125	Gli2	GLI-Kruppel family member GLI2
C05	Mm.5098	NM_008130	Gli3	GLI-Kruppel family member GLI3
C06	Mm.166318	NM_011824	Grem1	Gremlin 1
C07	Mm.394930	NM_019827	Gsk3b	Glycogen synthase kinase 3 beta
C08	Mm.145857	NM_144881	Hhat	Hedgehog acyltransferase
C09	Mm.254493	NM_020259	Hhip	Hedgehog-interacting protein
C10	Mm.439736	NM_010544	Ihh	Indian hedgehog
C11	Mm.239498	NM_153143	Kctd11	Potassium channel tetramerisation domain containing 11
C12	Mm.34083	NM_010690	Lats1	Large tumor suppressor
D01	Mm.347899	NM_015771	Lats2	Large tumor suppressor 2
D02	Mm.23847	NM_001081088	Lrp2	Low density lipoprotein receptor-related protein 2
D03	Mm.196581	NM_011949	Mapk1	Mitogen-activated protein kinase 1
D04	Mm.35764	NM_026735	Mobk1a	MOB1, Mps One Binder kinase activator-like 1A (yeast)
D05	Mm.215481	NM_144800	Mtss1	Metastasis suppressor 1
D06	Mm.297109	NM_010898	Nf2	Neurofibromatosis 2
D07	Mm.3484	NM_008720	Npc1	Niemann Pick type C1
D08	Mm.4390	NM_010949	Numb	Numb gene homolog (Drosophila)
D09	Mm.134516	NM_144841	Otx2	Orthodenticle homolog 2 (Drosophila)
D10	Mm.19111	NM_008854	Prkaca	Protein kinase, cAMP dependent, catalytic, alpha
D11	Mm.16766	NM_011100	Prkacb	Protein kinase, cAMP dependent, catalytic, beta
D12	Mm.228798	NM_008957	Ptch1	Patched homolog 1
E01	Mm.287037	NM_008958	Ptch2	Patched homolog 2
E02	Mm.33873	NM_001083342	Ptchd2	Patched domain containing 2
E03	Mm.61213	NM_029049	Ptchd3	Patched domain containing 3
E04	Mm.86744	NM_008999	Rab23	RAB23, member RAS oncogene family
E05	Mm.391013	NM_009820	Runx2	Runt related transcription factor 2
E06	Mm.281691	NM_013834	Sfrp1	Secreted frizzled-related protein 1
E07	Mm.57202	NM_009170	Shh	Sonic hedgehog
E08	Mm.39093	NM_013665	Shox2	Short stature homeobox 2

Position	UniGene	GenBank	Symbol	Description
E09	Mm.29279	NM_176996	Smo	Smoothed homolog (Drosophila)
E10	Mm.262330	NM_019635	Stk3	Serine/threonine kinase 3 (Ste20, yeast homolog)
E11	Mm.310974	NM_175031	Stk36	Serine/threonine kinase 36 (fused homolog, Drosophila)
E12	Mm.41210	NM_015752	Sufu	Suppressor of fused homolog (Drosophila)
F01	Mm.222	NM_011640	Trp53	Transformation related protein 53
F02	Mm.282184	NM_009505	Vegfa	Vascular endothelial growth factor A
F03	Mm.32831	NM_011915	Wif1	Wnt inhibitory factor 1
F04	Mm.1123	NM_021279	Wnt1	Wingless-related MMTV integration site 1
F05	Mm.5130	NM_009518	Wnt10a	Wingless related MMTV integration site 10a
F06	Mm.4709	NM_011718	Wnt10b	Wingless related MMTV integration site 10b
F07	Mm.22182	NM_009519	Wnt11	Wingless-related MMTV integration site 11
F08	Mm.137403	NM_053116	Wnt16	Wingless-related MMTV integration site 16
F09	Mm.33653	NM_023653	Wnt2	Wingless-related MMTV integration site 2
F10	Mm.10740	NM_009520	Wnt2b	Wingless related MMTV integration site 2b
F11	Mm.159091	NM_009521	Wnt3	Wingless-related MMTV integration site 3
F12	Mm.1367	NM_009522	Wnt3a	Wingless-related MMTV integration site 3A
G01	Mm.20355	NM_009523	Wnt4	Wingless-related MMTV integration site 4
G02	Mm.287544	NM_009524	Wnt5a	Wingless-related MMTV integration site 5A
G03	Mm.321818	NM_009525	Wnt5b	Wingless-related MMTV integration site 5B
G04	Mm.268282	NM_009526	Wnt6	Wingless-related MMTV integration site 6
G05	Mm.56964	NM_009527	Wnt7a	Wingless-related MMTV integration site 7A
G06	Mm.306946	NM_009528	Wnt7b	Wingless-related MMTV integration site 7B
G07	Mm.558	NM_009290	Wnt8a	Wingless-related MMTV integration site 8A
G08	Mm.88365	NM_011720	Wnt8b	Wingless related MMTV integration site 8b
G09	Mm.218794	NM_139298	Wnt9a	Wingless-type MMTV integration site 9A
G10	Mm.215161	NM_011719	Wnt9b	Wingless-type MMTV integration site 9B
G11	Mm.335350	NM_009573	Zic1	Zinc finger protein of the cerebellum 1
G12	Mm.308936	NM_009574	Zic2	Zinc finger protein of the cerebellum 2
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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