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

Mouse Cell Junction PathwayFinder

Cat. no. 330231 PAMM-213ZA

For pathway expression analysis

Format	For use with the following real-time cyclers
RT² 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
RT² Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT² Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
RT² Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT² Profiler PCR Array, Format F	Roche® LightCycler® 480 (96-well block)
RT² Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT² Profiler PCR Array, Format H	Fluidigm® BioMark™

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Description

The Mouse Cell Junction PathwayFinder RT² Profiler PCR Array profiles the expression of 84 key genes encoding components of various subcellular macromolecular structures connecting cells to each other or to the extracellular matrix (ECM). Cell junctions include focal adhesions, tight junctions, gap junctions, adherens junctions, desmosomes, and hemidesmosomes, and each one plays a specific role in adhesion, communication, and transduction of mechanical force. Tight junctions seal adjacent epithelial cells together, preventing the passage of most dissolved molecules as well as membrane-bound lipids and proteins between the apical and basolateral epithelial surfaces. Adjacent cells communicate through gap junctions that allow ions and small molecules to pass between their cytoplasms. Adherens junctions and desmosomes form around cadherin-mediated cell–cell contacts, while focal adhesions and hemidesmosomes form around integrin-mediated cell–ECM contacts. Adherens junctions and focal adhesions connect the intracellular domains of their cell surface receptors to actin filaments, while the desmosomes and hemidesmosomes connect to intermediate filaments. Although specific cell junctions predominate in certain cell types, all cells interact with their environment via more than one or even all of these junctions. Analyzing the expression of junction components can help determine their relative importance to the biology of the cellular or disease processes under study. Follow-up studies with arrays specific to the relevant junctions can then further explore the junctions' roles in cell biology. Using real-time PCR, research studies can easily and reliably analyze the expression of a focused panel of genes involved in cell-cell and cell-ECM junctions 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	Cav1	Cav2	Cav3	Cdh1	Cdh2	Cldn1	Cldn10	Cldn11	Cldn12	Cldn14	Cldn15	Cldn16
B	Cldn17	Cldn18	Cldn19	Cldn2	Cldn3	Cldn4	Cldn5	Cldn6	Cldn7	Cldn8	Cldn9	Dll1
C	Dsc1	Dsc2	Dsc3	Dsg1a	Dsg2	Dsg3	Dsg4	Dsp	Dst	Esam	F11r	Gja1
D	Gja3	Gja4	Gja5	Gja8	Gjb1	Gjb2	Gjb3	Gjb4	Gjb5	Gjb6	Gjc2	Gjd2
E	Gje1	Icam1	Icam2	Itga1	Itga2	Itga3	Itga4	Itga5	Itga6	Itga7	Itga8	Itga9
F	Itgal	Itgam	Itgav	Itgb1	Itgb2	Itgb3	Itgb4	Itgb5	Itgb6	Jam2	Jam3	Jup
G	Notch1	Notch2	Notch3	Notch4	Ocln	Plec	Pvrl1	Pvrl2	Pvrl4	Tjp1	Tjp2	Tjp3
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.28278	NM_007616	Cav1	Caveolin 1, caveolae protein
A02	Mm.396075	NM_016900	Cav2	Caveolin 2
A03	Mm.3924	NM_007617	Cav3	Caveolin 3
A04	Mm.35605	NM_009864	Cdh1	Cadherin 1
A05	Mm.257437	NM_007664	Cdh2	Cadherin 2
A06	Mm.289441	NM_016674	Cldn1	Claudin 1
A07	Mm.87456	NM_021386	Cldn10	Claudin 10
A08	Mm.4425	NM_008770	Cldn11	Claudin 11
A09	Mm.40132	NM_022890	Cldn12	Claudin 12
A10	Mm.328716	NM_019500	Cldn14	Claudin 14
A11	Mm.87202	NM_021719	Cldn15	Claudin 15
A12	Mm.275205	NM_053241	Cldn16	Claudin 16
B01	Mm.126860	NM_181490	Cldn17	Claudin 17
B02	Mm.386784	NM_019815	Cldn18	Claudin 18
B03	Mm.130701	NM_153105	Cldn19	Claudin 19
B04	Mm.117068	NM_016675	Cldn2	Claudin 2
B05	Mm.158662	NM_009902	Cldn3	Claudin 3
B06	Mm.7339	NM_009903	Cldn4	Claudin 4
B07	Mm.22768	NM_013805	Cldn5	Claudin 5
B08	Mm.86421	NM_018777	Cldn6	Claudin 6
B09	Mm.281896	NM_016887	Cldn7	Claudin 7
B10	Mm.25836	NM_018778	Cldn8	Claudin 8
B11	Mm.103738	NM_020293	Cldn9	Claudin 9
B12	Mm.4875	NM_007865	Dll1	Delta-like 1 (Drosophila)
C01	Mm.33740	NM_013504	Dsc1	Desmocollin 1
C02	Mm.280547	NM_013505	Dsc2	Desmocollin 2
C03	Mm.89935	NM_007882	Dsc3	Desmocollin 3
C04	Mm.37953	NM_010079	Dsg1a	Desmoglein 1 alpha
C05	Mm.345891	NM_007883	Dsg2	Desmoglein 2
C06	Mm.106811	NM_030596	Dsg3	Desmoglein 3
C07	Mm.358619	NM_181564	Dsg4	Desmoglein 4
C08	Mm.355327	NM_023842	Dsp	Desmoplakin
C09	Mm.478284	NM_134448	Dst	Dystonin
C10	Mm.41751	NM_027102	Esam	Endothelial cell-specific adhesion molecule
C11	Mm.294882	NM_172647	F11r	F11 receptor
C12	Mm.378921	NM_010288	Gja1	Gap junction protein, alpha 1
D01	Mm.57207	NM_016975	Gja3	Gap junction protein, alpha 3
D02	Mm.24615	NM_008120	Gja4	Gap junction protein, alpha 4
D03	Mm.281816	NM_008121	Gja5	Gap junction protein, alpha 5
D04	Mm.468160	NM_008123	Gja8	Gap junction protein, alpha 8
D05	Mm.21198	NM_008124	Gjb1	Gap junction protein, beta 1
D06	Mm.390683	NM_008125	Gjb2	Gap junction protein, beta 2
D07	Mm.90003	NM_008126	Gjb3	Gap junction protein, beta 3
D08	Mm.56906	NM_008127	Gjb4	Gap junction protein, beta 4
D09	Mm.26859	NM_010291	Gjb5	Gap junction protein, beta 5

Position	UniGene	GenBank	Symbol	Description
D10	Mm.25652	NM_008128	Gjb6	Gap junction protein, beta 6
D11	Mm.40016	NM_175452	Gjc2	Gap junction protein, gamma 2
D12	Mm.389394	NM_010290	Gjd2	Gap junction protein, delta 2
E01	Mm.332771	NM_029722	Gje1	Gap junction protein, epsilon 1
E02	Mm.435508	NM_010493	Icam1	Intercellular adhesion molecule 1
E03	Mm.394	NM_010494	Icam2	Intercellular adhesion molecule 2
E04	Mm.482186	NM_001033228	Itga1	Integrin alpha 1
E05	Mm.5007	NM_008396	Itga2	Integrin alpha 2
E06	Mm.57035	NM_013565	Itga3	Integrin alpha 3
E07	Mm.31903	NM_010576	Itga4	Integrin alpha 4
E08	Mm.16234	NM_010577	Itga5	Integrin alpha 5 (fibronectin receptor alpha)
E09	Mm.225096	NM_008397	Itga6	Integrin alpha 6
E10	Mm.179747	NM_008398	Itga7	Integrin alpha 7
E11	Mm.329997	NM_001001309	Itga8	Integrin alpha 8
E12	Mm.335520	NM_133721	Itga9	Integrin alpha 9
F01	Mm.1618	NM_008400	Itgal	Integrin alpha L
F02	Mm.262106	NM_008401	Itgam	Integrin alpha M
F03	Mm.227	NM_008402	Itgav	Integrin alpha V
F04	Mm.263396	NM_010578	Itgb1	Integrin beta 1 (fibronectin receptor beta)
F05	Mm.1137	NM_008404	Itgb2	Integrin beta 2
F06	Mm.87150	NM_016780	Itgb3	Integrin beta 3
F07	Mm.213873	NM_001005608	Itgb4	Integrin beta 4
F08	Mm.6424	NM_010580	Itgb5	Integrin beta 5
F09	Mm.98193	NM_021359	Itgb6	Integrin beta 6
F10	Mm.41758	NM_023844	Jam2	Junction adhesion molecule 2
F11	Mm.28770	NM_023277	Jam3	Junction adhesion molecule 3
F12	Mm.299774	NM_010593	Jup	Junction plakoglobin
G01	Mm.290610	NM_008714	Notch1	Notch gene homolog 1 (Drosophila)
G02	Mm.254017	NM_010928	Notch2	Notch gene homolog 2 (Drosophila)
G03	Mm.439741	NM_008716	Notch3	Notch gene homolog 3 (Drosophila)
G04	Mm.173813	NM_010929	Notch4	Notch gene homolog 4 (Drosophila)
G05	Mm.4807	NM_008756	Ocln	Occludin
G06	Mm.234912	NM_011117	Plec	Plectin
G07	Mm.335096	NM_021424	Pvrl1	Poliovirus receptor-related 1
G08	Mm.4341	NM_008990	Pvrl2	Poliovirus receptor-related 2
G09	Mm.263414	NM_027893	Pvrl4	Poliovirus receptor-related 4
G10	Mm.4342	NM_009386	Tjp1	Tight junction protein 1
G11	Mm.104744	NM_011597	Tjp2	Tight junction protein 2
G12	Mm.27984	NM_013769	Tjp3	Tight junction protein 3
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 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
RT² 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
RT² 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.

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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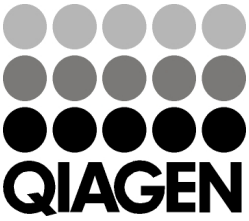

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