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

Mouse Macular Degeneration

Cat. no. 330231 PAMM-171ZA

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 Macular Degeneration RT² Profiler PCR Array profiles the expression of 84 genes involved in the pathogenesis of age-related macular degeneration (AMD). AMD usually affects older adults and can make it difficult or impossible to read or recognize faces, although enough peripheral vision remains to allow other daily life activities. AMD is an ocular disease that involves an aspect-specific region of the retina called the macula. The macula facilitates central vision and permits high-resolution visual acuity due to its dense concentration of cone photoreceptors. AMD starts with characteristic yellow deposits (drusen) in the macula between the retinal pigment epithelium and the underlying choroid, with pigmentary abnormalities. The late stage is divided into two groups: dry (non-exudative) and wet (exudative/neovascular) forms. The dry form is characterized by atrophic changes in the macula and clinically has a slower deterioration and better preservation of visual acuity. Wet AMD involves choroidal neovascularization, which is the formation of new abnormal blood vessels in the choriocapillaries through Brusch's membrane. These vessels have a greater tendency of leakage and bleeding into the macula, ultimately leading to irreversible damage to the photoreceptors if left untreated. The molecular pathways underlying AMD's onset and progression remain poorly delineated. The genes profiled with this array include inflammatory and endothelial cell markers for vascularization as well as AMD-associated markers for drusen, Brusch's membrane, and retinal abnormalities. A set of controls present on each array enables data analysis using the ΔΔ CT method of relative quantification and assessment of reverse transcription performance, genomic DNA contamination, and PCR performance. Using real-time PCR, research studies can easily and reliably analyze the expression of a focused panel of genes involved in age-related macular degeneration 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	Abca1	Abca4	Ace	Alb	Anxa2	Anxa5	Apoe	C2	C3	C4a	C9	Ccl11
B	Ccl2	Cfb	Cfh	Cfhr1	Cfhr3	Cfi	Clu	Col14a1	Cp	Crp	Cryaa	Cryab
C	Crygd	Cst3	Ctgf	Ctsd	Cx3cr1	Cxcl12	Dicer1	Efemp1	Eln	Ercc6	Fancg	Fasl
D	Fbln5	Fn1	Gfap	Gstm1	Gstp1	Hc	Hif1a	Hmcn1	Hmox1	Hmox2	Htra1	Icam1
E	Igf1	Il6	Lep	Lipc	Lpl	Mmp2	Mmp9	Nos1	Nos3	Plg	Pon1	Rho
F	Rlbp1	Rpe65	Sag	Scarb1	Serpine1	Serpinf1	Serping1	Slc4a1	Sod2	Sparc	Stmn1	Tgfb1
G	Thy1	Timp1	Timp3	Tlr3	Tlr4	Tnmd	Trf	Vegfa	Vim	Vldlr	Vtn	Vwf
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.277376	NM_013454	Abca1	ATP-binding cassette, sub-family A (ABC1), member 1
A02	Mm.3918	NM_007378	Abca4	ATP-binding cassette, sub-family A (ABC1), member 4
A03	Mm.754	NM_009598	Ace	Angiotensin I converting enzyme (peptidyl-dipeptidase A) 1
A04	Mm.16773	NM_009654	Alb	Albumin
A05	Mm.238343	NM_007585	Anxa2	Annexin A2
A06	Mm.1620	NM_009673	Anxa5	Annexin A5
A07	Mm.305152	NM_009696	Apoe	Apolipoprotein E
A08	Mm.283217	NM_013484	C2	Complement component 2 (within H-2S)
A09	Mm.19131	NM_009778	C3	Complement component 3
A10	Mm.477109	NM_011413	C4a	Complement component 4A (Rodgers blood group)
A11	Mm.29095	NM_013485	C9	Complement component 9
A12	Mm.4686	NM_011330	Ccl11	Chemokine (C-C motif) ligand 11
B01	Mm.290320	NM_011333	Ccl2	Chemokine (C-C motif) ligand 2
B02	Mm.653	NM_008198	Cfb	Complement factor B
B03	Mm.8655	NM_009888	Cfh	Complement component factor h
B04	Mm.220362	NM_015780	Cfhr1	Complement factor H-related 1
B05	Mm.483958	XM_888824	Cfhr3	Complement factor H-related 3
B06	Mm.117180	NM_007686	Cfi	Complement component factor i
B07	Mm.200608	NM_013492	Clu	Clusterin
B08	Mm.297859	NM_181277	Col14a1	Collagen, type XIV, alpha 1
B09	Mm.13787	NM_007752	Cp	Ceruloplasmin
B10	Mm.28767	NM_007768	Crp	C-reactive protein, pentraxin-related
B11	Mm.1228	NM_013501	Cryaa	Crystallin, alpha A
B12	Mm.178	NM_009964	Cryab	Crystallin, alpha B
C01	Mm.425031	NM_007776	Crygd	Crystallin, gamma D
C02	Mm.4263	NM_009976	Cst3	Cystatin C
C03	Mm.390287	NM_010217	Ctgf	Connective tissue growth factor
C04	Mm.231395	NM_009983	Ctsd	Cathepsin D
C05	Mm.44065	NM_009987	Cx3cr1	Chemokine (C-X3-C) receptor 1
C06	Mm.303231	NM_021704	Cxcl12	Chemokine (C-X-C motif) ligand 12
C07	Mm.21135	NM_148948	Dicer1	Dicer1, Dcr-1 homolog (Drosophila)
C08	Mm.44176	NM_146015	Efemp1	Epidermal growth factor-containing fibulin-like extracellular matrix protein 1
C09	Mm.275320	NM_007925	Eln	Elastin
C10	Mm.318310	NM_001081221	Ercc6	Excision repair cross-complementing rodent repair deficiency, complementation group 6
C11	Mm.23122	NM_053081	Fancg	Fanconi anemia, complementation group G
C12	Mm.3355	NM_010177	Fasl	Fas ligand (TNF superfamily, member 6)
D01	Mm.288381	NM_011812	Fbln5	Fibulin 5
D02	Mm.193099	NM_010233	Fn1	Fibronectin 1
D03	Mm.1239	NM_010277	Gfap	Glial fibrillary acidic protein
D04	Mm.37199	NM_010358	Gstm1	Glutathione S-transferase, mu 1
D05	Mm.299292	NM_013541	Gstp1	Glutathione S-transferase, pi 1
D06	Mm.2168	NM_010406	Hc	Hemolytic complement
D07	Mm.3879	NM_010431	Hif1a	Hypoxia inducible factor 1, alpha subunit
D08	Mm.379425	NM_001024720	Hmcn1	Hemicentin 1

Position	UniGene	GenBank	Symbol	Description
D09	Mm.276389	NM_010442	Hmox1	Heme oxygenase (decycling) 1
D10	Mm.272866	NM_010443	Hmox2	Heme oxygenase (decycling) 2
D11	Mm.30156	NM_019564	Htra1	HtrA serine peptidase 1
D12	Mm.435508	NM_010493	Icam1	Intercellular adhesion molecule 1
E01	Mm.268521	NM_010512	Igf1	Insulin-like growth factor 1
E02	Mm.1019	NM_031168	Il6	Interleukin 6
E03	Mm.277072	NM_008493	Lep	Leptin
E04	Mm.390187	NM_008280	Lipc	Lipase, hepatic
E05	Mm.1514	NM_008509	Lpl	Lipoprotein lipase
E06	Mm.29564	NM_008610	Mmp2	Matrix metallopeptidase 2
E07	Mm.4406	NM_013599	Mmp9	Matrix metallopeptidase 9
E08	Mm.44249	NM_008712	Nos1	Nitric oxide synthase 1, neuronal
E09	Mm.258415	NM_008713	Nos3	Nitric oxide synthase 3, endothelial cell
E10	Mm.971	NM_008877	Plg	Plasminogen
E11	Mm.237657	NM_011134	Pon1	Paraoxonase 1
E12	Mm.2965	NM_145383	Rho	Rhodopsin
F01	Mm.41653	NM_020599	Rlbp1	Retinaldehyde binding protein 1
F02	Mm.131708	NM_029987	Rpe65	Retinal pigment epithelium 65
F03	Mm.1276	NM_009118	Sag	Retinal S-antigen
F04	Mm.282242	NM_016741	Scarb1	Scavenger receptor class B, member 1
F05	Mm.250422	NM_008871	Serpine1	Serine (or cysteine) peptidase inhibitor, clade E, member 1
F06	Mm.2044	NM_011340	Serpinf1	Serine (or cysteine) peptidase inhibitor, clade F, member 1
F07	Mm.38888	NM_009776	Serping1	Serine (or cysteine) peptidase inhibitor, clade G, member 1
F08	Mm.7248	NM_011403	Slc4a1	Solute carrier family 4 (anion exchanger), member 1
F09	Mm.290876	NM_013671	Sod2	Superoxide dismutase 2, mitochondrial
F10	Mm.291442	NM_009242	Sparc	Secreted acidic cysteine rich glycoprotein
F11	Mm.378957	NM_019641	Stmn1	Stathmin 1
F12	Mm.248380	NM_011577	Tgfb1	Transforming growth factor, beta 1
G01	Mm.3951	NM_009382	Thy1	Thymus cell antigen 1, theta
G02	Mm.8245	NM_011593	Timp1	Tissue inhibitor of metalloproteinase 1
G03	Mm.4871	NM_011595	Timp3	Tissue inhibitor of metalloproteinase 3
G04	Mm.33874	NM_126166	Tlr3	Toll-like receptor 3
G05	Mm.38049	NM_021297	Tlr4	Toll-like receptor 4
G06	Mm.46221	NM_022322	Tnmd	Tenomodulin
G07	Mm.37214	NM_133977	Trf	Transferrin
G08	Mm.282184	NM_009505	Vegfa	Vascular endothelial growth factor A
G09	Mm.268000	NM_011701	Vim	Vimentin
G10	Mm.4141	NM_013703	Vldlr	Very low density lipoprotein receptor
G11	Mm.3667	NM_011707	Vtn	Vitronectin
G12	Mm.22339	NM_011708	Vwf	Von Willebrand factor homolog
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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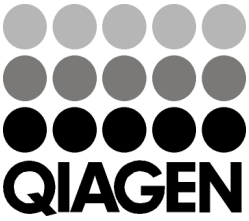

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