

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

Mouse Homeobox (HOX) Genes

Cat. no. 330231 PAMM-083ZA

For pathway expression analysis

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



Sample & Assay Technologies

Description

The Mouse Homeobox (HOX) Genes RT² Profiler PCR Array profiles the expression of 84 HOX genes involved in multicellular organismal development. HOX genes encode a group of homeodomain-containing transcription factors, which were initially described as controlling segmental patterning during development. Recently, their importance has been reemphasized by stem cell and cancer researches. Although these HOX genes have been grouped according to their established roles in multicellular organismal development, their true function in your cellular systems is waiting to be discovered by you. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of HOX genes 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	Alx1	Alx3	Alx4	Arx	Barx1	Cdx1	Cdx2	Cdx4	Cux1	Dlx1	Dlx2	Dlx3
B	Dlx4	Dlx5	Dlx6	Dmbx1	Emx1	Emx2	En1	En2	Hesx1	Hhex	Hlx	Hopx
C	Hoxa1	Hoxa7	Hoxa9	Hoxb1	Hoxb2	Hoxb3	Hoxb4	Hoxb7	Hoxb8	Hoxb9	Hoxc10	Hoxc11
D	Hoxc12	Hoxc13	Hoxc6	Hoxc8	Hoxc9	Hoxd1	Hoxd12	Hoxd13	Hoxd3	Hoxd4	Hoxd8	Hoxd9
E	Isl1	Isl2	Lbx1	Lbx2	Lhx1	Lmx1a	Lmx1b	Meis1	Meox1	Misl1	Mlx	Max1
F	Max2	Nkx3-1	Otp	Otx1	Otx2	Pax3	Pdx1	Phox2b	Pitx1	Pitx2	Pitx3	Pou5f1
G	Prop1	Prox1	Shox2	Six1	Six2	Six3	Six4	Six6	Tlx1	Vax1	Vax2	Vax1
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.19287	NM_172553	Alx1	ALX homeobox 1
A02	Mm.10112	NM_007441	Alx3	Aristaless-like homeobox 3
A03	Mm.389389	NM_007442	Alx4	Aristaless-like homeobox 4
A04	Mm.275547	NM_007492	Arx	Aristaless related homeobox
A05	Mm.42241	NM_007526	Barx1	BarH-like homeobox 1
A06	Mm.144448	NM_009880	Cdx1	Caudal type homeobox 1
A07	Mm.20358	NM_007673	Cdx2	Caudal type homeobox 2
A08	Mm.4353	NM_007674	Cdx4	Caudal type homeobox 4
A09	Mm.320317	NM_009986	Cux1	Cut-like homeobox 1
A10	Mm.4543	NM_010053	Dlx1	Distal-less homeobox 1
A11	Mm.3896	NM_010054	Dlx2	Distal-less homeobox 2
A12	Mm.5194	NM_010055	Dlx3	Distal-less homeobox 3
B01	Mm.439766	NM_007867	Dlx4	Distal-less homeobox 4
B02	Mm.4873	NM_198854	Dlx5	Distal-less homeobox 5
B03	Mm.439763	NM_010057	Dlx6	Distal-less homeobox 6
B04	Mm.213206	NM_130865	Dmbx1	Diencephalon/mesencephalon homeobox 1
B05	Mm.391473	NM_010131	Emx1	Empty spiracles homolog 1 (Drosophila)
B06	Mm.245394	NM_010132	Emx2	Empty spiracles homolog 2 (Drosophila)
B07	Mm.2657	NM_010133	En1	Engrailed 1
B08	Mm.4298	NM_010134	En2	Engrailed 2
B09	Mm.4802	NM_010420	Hesx1	Homeobox gene expressed in ES cells
B10	Mm.33896	NM_008245	Hhex	Hematopoietically expressed homeobox
B11	Mm.1347	NM_008250	Hlx	H2.0-like homeobox
B12	Mm.181852	NM_175606	Hopx	HOP homeobox
C01	Mm.197	NM_010449	Hoxa1	Homeobox A1
C02	Mm.294826	NM_010455	Hoxa7	Homeobox A7
C03	Mm.4694	NM_010456	Hoxa9	Homeobox A9
C04	Mm.890	NM_008266	Hoxb1	Homeobox B1
C05	Mm.281153	NM_134032	Hoxb2	Homeobox B2
C06	Mm.342481	NM_010458	Hoxb3	Homeobox B3
C07	Mm.3546	NM_010459	Hoxb4	Homeobox B4
C08	Mm.390366	NM_010460	Hoxb7	Homeobox B7
C09	Mm.4822	NM_010461	Hoxb8	Homeobox B8
C10	Mm.258271	NM_008270	Hoxb9	Homeobox B9
C11	Mm.31665	NM_010462	Hoxc10	Homeobox C10
C12	Mm.37692	NM_001024842	Hoxc11	Homeobox C11
D01	Mm.221179	NM_010463	Hoxc12	Homeobox C12
D02	Mm.207062	NM_010464	Hoxc13	Homeobox C13
D03	Mm.4444	NM_010465	Hoxc6	Homeobox C6
D04	Mm.6167	NM_010466	Hoxc8	Homeobox C8
D05	Mm.4765	NM_008272	Hoxc9	Homeobox C9
D06	Mm.4932	NM_010467	Hoxd1	Homeobox D1
D07	Mm.57124	NM_008274	Hoxd12	Homeobox D12
D08	Mm.57227	NM_008275	Hoxd13	Homeobox D13
D09	Mm.430708	NM_010468	Hoxd3	Homeobox D3

Position	UniGene	GenBank	Symbol	Description
D10	Mm.482194	NM_010469	Hoxd4	Homeobox D4
D11	Mm.280673	NM_008276	Hoxd8	Homeobox D8
D12	Mm.26544	NM_013555	Hoxd9	Homeobox D9
E01	Mm.42242	NM_021459	Isl1	ISL1 transcription factor, LIM/homeodomain
E02	Mm.273996	NM_027397	Isl2	Insulin related protein 2 (islet 2)
E03	Mm.116815	NM_010691	Lbx1	Ladybird homeobox homolog 1 (Drosophila)
E04	Mm.20359	NM_010692	Lbx2	Ladybird homeobox homolog 2 (Drosophila)
E05	Mm.4965	NM_008498	Lhx1	LIM homeobox protein 1
E06	Mm.330081	NM_033652	Lmx1a	LIM homeobox transcription factor 1 alpha
E07	Mm.39825	NM_010725	Lmx1b	LIM homeobox transcription factor 1 beta
E08	Mm.356578	NM_010789	Meis1	Meis homeobox 1
E09	Mm.3404	NM_010791	Meox1	Mesenchyme homeobox 1
E10	Mm.103647	NM_013729	Mixl1	Mix1 homeobox-like 1 (Xenopus laevis)
E11	Mm.257186	NM_177595	Mkx	Mohawk homeobox
E12	Mm.256509	NM_010835	Msx1	Homeobox, msh-like 1
F01	Mm.1763	NM_013601	Msx2	Homeobox, msh-like 2
F02	Mm.3520	NM_010921	Nkx3-1	NK-3 transcription factor, locus 1 (Drosophila)
F03	Mm.42051	NM_011021	Otp	Orthopedia homolog (Drosophila)
F04	Mm.129663	NM_011023	Otx1	Orthodenticle homolog 1 (Drosophila)
F05	Mm.134516	NM_144841	Otx2	Orthodenticle homolog 2 (Drosophila)
F06	Mm.1371	NM_008781	Pax3	Paired box gene 3
F07	Mm.389714	NM_008814	Pdx1	Pancreatic and duodenal homeobox 1
F08	Mm.62505	NM_008888	Phox2b	Paired-like homeobox 2b
F09	Mm.135195	NM_011097	Pitx1	Paired-like homeodomain transcription factor 1
F10	Mm.246804	NM_011098	Pitx2	Paired-like homeodomain transcription factor 2
F11	Mm.6255	NM_008852	Pitx3	Paired-like homeodomain transcription factor 3
F12	Mm.17031	NM_013633	Pou5f1	POU domain, class 5, transcription factor 1
G01	Mm.1386	NM_008936	Prop1	Paired like homeodomain factor 1
G02	Mm.132579	NM_008937	Prox1	Prospero-related homeobox 1
G03	Mm.39093	NM_013665	Shox2	Short stature homeobox 2
G04	Mm.4645	NM_009189	Six1	Sine oculis-related homeobox 1 homolog (Drosophila)
G05	Mm.5039	NM_011380	Six2	Sine oculis-related homeobox 2 homolog (Drosophila)
G06	Mm.370208	NM_011381	Six3	Sine oculis-related homeobox 3 homolog (Drosophila)
G07	Mm.249575	NM_011382	Six4	Sine oculis-related homeobox 4 homolog (Drosophila)
G08	Mm.57138	NM_011384	Six6	Sine oculis-related homeobox 6 homolog (Drosophila)
G09	Mm.391203	NM_021901	Tlx1	T-cell leukemia, homeobox 1
G10	Mm.23801	NM_009501	Vax1	Ventral anterior homeobox containing gene 1
G11	Mm.307165	NM_011912	Vax2	Ventral anterior homeobox containing gene 2
G12	Mm.207061	NM_054068	Vsx1	Visual system homeobox 1 homolog (zebrafish)
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.
RT ² First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT ² 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
RT ² 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
RT ² 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.

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