

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

Human Homeobox (HOX) Genes

Cat. no. 330231 PAHS-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 Human 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	ALX4	ARX	BARX1	CDX1	CDX2	CUX1	DLX1	DLX2	DLX3	DLX4	DLX5
B	DLX6	DMBX1	DRGX	EMX1	EN1	EN2	HESX1	HHEX	HLX	HOPX	HOXA1	HOXA7
C	HOXA9	HOXB1	HOXB2	HOXB3	HOXB4	HOXB7	HOXB8	HOXB9	HOXC10	HOXC11	HOXC12	HOXC13
D	HOXC6	HOXC8	HOXC9	HOXD1	HOXD11	HOXD12	HOXD13	HOXD3	HOXD4	HOXD8	HOXD9	ISL1
E	ISL2	LBX1	LBX2	LHX1	LMX1A	LMX1B	MEIS1	MEOX1	MIXL1	MXI	MSX1	MSX2
F	NKX3-1	OTF	OTX1	OTX2	PAX3	PDHX	PHOX2B	PITX1	PITX2	PITX3	POU5F1	PROP1
G	PROX1	SHOX	SHOX2	SIX1	SIX2	SIX3	SIX4	SIX6	TLX1	VAX1	VAX2	VSX1
H	ACTB	B2M	GAPDH	HPRT1	RPLP0	HGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Hs.41683	NM_006982	ALX1	ALX homeobox 1
A02	Hs.436055	NM_021926	ALX4	ALX homeobox 4
A03	Hs.300304	NM_139058	ARX	Aristaless related homeobox
A04	Hs.164960	NM_021570	BARX1	BARX homeobox 1
A05	Hs.1545	NM_001804	CDX1	Caudal type homeobox 1
A06	Hs.174249	NM_001265	CDX2	Caudal type homeobox 2
A07	Hs.654389	NM_181552	CUX1	Cut-like homeobox 1
A08	Hs.407015	NM_178120	DLX1	Distal-less homeobox 1
A09	Hs.419	NM_004405	DLX2	Distal-less homeobox 2
A10	Hs.134194	NM_005220	DLX3	Distal-less homeobox 3
A11	Hs.591167	NM_001934	DLX4	Distal-less homeobox 4
A12	Hs.99348	NM_005221	DLX5	Distal-less homeobox 5
B01	Hs.249196	NM_005222	DLX6	Distal-less homeobox 6
B02	Hs.375623	NM_147192	DMBX1	Diencephalon/mesencephalon homeobox 1
B03	Hs.534530	NM_001080520	DRGX	Dorsal root ganglia homeobox
B04	Hs.516090	NM_004097	EMX1	Empty spiracles homeobox 1
B05	Hs.271977	NM_001426	EN1	Engrailed homeobox 1
B06	Hs.134989	NM_001427	EN2	Engrailed homeobox 2
B07	Hs.171980	NM_003865	HESX1	HESX homeobox 1
B08	Hs.118651	NM_002729	HHEX	Hematopoietically expressed homeobox
B09	Hs.74870	NM_021958	HLX	H2.0-like homeobox
B10	Hs.654864	NM_139211	HOPX	HOP homeobox
B11	Hs.67397	NM_005522	HOXA1	Homeobox A1
B12	Hs.446318	NM_006896	HOXA7	Homeobox A7
C01	Hs.659350	NM_152739	HOXA9	Homeobox A9
C02	Hs.99992	NM_002144	HOXB1	Homeobox B1
C03	Hs.514289	NM_002145	HOXB2	Homeobox B2
C04	Hs.654560	NM_002146	HOXB3	Homeobox B3
C05	Hs.664706	NM_024015	HOXB4	Homeobox B4
C06	Hs.436181	NM_004502	HOXB7	Homeobox B7
C07	Hs.514292	NM_024016	HOXB8	Homeobox B8
C08	Hs.463350	NM_024017	HOXB9	Homeobox B9
C09	Hs.44276	NM_017409	HOXC10	Homeobox C10
C10	Hs.127562	NM_014212	HOXC11	Homeobox C11
C11	Hs.381267	NM_173860	HOXC12	Homeobox C12
C12	Hs.118608	NM_017410	HOXC13	Homeobox C13
D01	Hs.549040	NM_004503	HOXC6	Homeobox C6
D02	Hs.664500	NM_022658	HOXC8	Homeobox C8
D03	Hs.549040	NM_006897	HOXC9	Homeobox C9
D04	Hs.83465	NM_024501	HOXD1	Homeobox D1
D05	Hs.421136	NM_021192	HOXD11	Homeobox D11
D06	Hs.450028	NM_021193	HOXD12	Homeobox D12
D07	Hs.152414	NM_000523	HOXD13	Homeobox D13
D08	Hs.93574	NM_006898	HOXD3	Homeobox D3
D09	Hs.591609	NM_014621	HOXD4	Homeobox D4

Position	UniGene	GenBank	Symbol	Description
D10	Hs.301963	NM_019558	HOXD8	Homeobox D8
D11	Hs.709219	NM_014213	HOXD9	Homeobox D9
D12	Hs.505	NM_002202	ISL1	ISL LIM homeobox 1
E01	Hs.444677	NM_145805	ISL2	ISL LIM homeobox 2
E02	Hs.37128	NM_006562	LBX1	Ladybird homeobox 1
E03	Hs.554975	NM_001009812	LBX2	Ladybird homeobox 2
E04	Hs.443727	NM_005568	LHX1	LIM homeobox 1
E05	Hs.667312	NM_177398	LMX1A	LIM homeobox transcription factor 1, alpha
E06	Hs.129133	NM_002316	LMX1B	LIM homeobox transcription factor 1, beta
E07	Hs.526754	NM_002398	MEIS1	Meis homeobox 1
E08	Hs.438	NM_004527	MEOX1	Mesenchyme homeobox 1
E09	Hs.710576	NM_031944	MIXL1	Mix paired-like homeobox
E10	Hs.128193	NM_173576	MKX	Mohawk homeobox
E11	Hs.424414	NM_002448	MSX1	Msh homeobox 1
E12	Hs.89404	NM_002449	MSX2	Msh homeobox 2
F01	Hs.55999	NM_006167	NKX3-1	NK3 homeobox 1
F02	Hs.202247	NM_032109	OTP	Orthopedia homeobox
F03	Hs.445340	NM_014562	OTX1	Orthodenticle homeobox 1
F04	Hs.288655	NM_021728	OTX2	Orthodenticle homeobox 2
F05	Hs.42146	NM_181461	PAX3	Paired box 3
F06	Hs.502315	NM_003477	PDHX	Pyruvate dehydrogenase complex, component X
F07	Hs.87202	NM_003924	PHOX2B	Paired-like homeobox 2b
F08	Hs.84136	NM_002653	PITX1	Paired-like homeodomain 1
F09	Hs.643588	NM_000325	PITX2	Paired-like homeodomain 2
F10	Hs.137568	NM_005029	PITX3	Paired-like homeodomain 3
F11	Hs.249184	NM_002701	POU5F1	POU class 5 homeobox 1
F12	Hs.158301	NM_006261	PROP1	PROP paired-like homeobox 1
G01	Hs.585369	NM_002763	PROX1	Prospero homeobox 1
G02	Hs.105932	NM_000451	SHOX	Short stature homeobox
G03	Hs.55967	NM_003030	SHOX2	Short stature homeobox 2
G04	Hs.716658	NM_005982	SIX1	SIX homeobox 1
G05	Hs.101937	NM_016932	SIX2	SIX homeobox 2
G06	Hs.567336	NM_005413	SIX3	SIX homeobox 3
G07	Hs.690393	NM_017420	SIX4	SIX homeobox 4
G08	Hs.194756	NM_007374	SIX6	SIX homeobox 6
G09	Hs.89583	NM_005521	TLX1	T-cell leukemia homeobox 1
G10	Hs.441536	NM_199131	VAX1	Ventral anterior homeobox 1
G11	Hs.249170	NM_012476	VAX2	Ventral anterior homeobox 2
G12	Hs.274264	NM_199425	VSX1	Visual system homeobox 1
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.
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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