

RT² IncRNA PCR Array (Rotor-Gene[®] Format)

Human Cell Development & Differentiation

Cat. no. 330721 LAHS-003ZR

For IncRNA expression analysis by pathway and disease using laboratory-verified SYBR[®] Green qPCR assays

Format	For use with the following real-time cyclers
RT ² IncRNA PCR Array, Format R	Rotor-Gene Q, other Rotor-Gene cyclers

Description

The Human Cell Development & Differentiation RT² IncRNA PCR Array profiles the expression of 84 long noncoding RNAs (lncRNAs) differentially expressed during cellular differentiation and organism development. This array provides researchers with a convenient and accurate way to analyze the lncRNAs most relevant to cell fate and cell lineage decisions. These lncRNAs have been carefully selected based on results published in peer-reviewed journals that suggest a correlation with different stages of development from stem cells to terminal differentiation. The profiling results from this array can potentially serve as a useful molecular marker for specific stem cells, may yield insights into the molecular mechanisms behind specific stem cell differentiation processes, and/or possibly help identify lncRNAs associated with the function of specific mature cells or tissue types. A set of controls present on this array enables data analysis using the $\Delta\Delta CT$ method of relative quantification, assessment of reverse transcription performance, and assessment of PCR performance. Using SYBR Green-based real-time PCR, the expression of a focused panel of lncRNAs related to development and differentiation can be easily and reliably analyzed with this RT² IncRNA PCR Array.

For further details, consult the *RT² IncRNA PCR Array Handbook*.

Shipping and storage

RT² lncRNA PCR Arrays in formats A, C, D, E, F, G, and R are shipped at ambient temperature, on dry ice, or on blue ice packs, depending on destination and accompanying products. RT² lncRNA 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 lncRNA 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: RT² IncRNA PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	N/A	ENST00000460833	ADAMTS9-AS2	ADAMTS9 antisense RNA 2
A02	N/A	ENST00000601203	AIRN	Antisense of IGF2R non-protein coding RNA
A03	Hs.632352	NR_040113	ANKRD20A5p	Ankyrin repeat domain 20 family, member A5, pseudogene
A04	N/A	NR_037803	BACE1-AS	BACE1 antisense RNA
A05	Hs.675323	NR_002832	BDNF-AS	BDNF antisense RNA
A06	Hs.287521	NR_026887	CEBPA-AS1	Hypothetical LOC80054
A07	N/A	ENST00000501177	CRNDE	Colorectal neoplasia differentially expressed (non-protein coding)
A08	N/A	ENST00000500689	DACT3-AS1	DACT3 antisense RNA 1
A09	Hs.744077	NR_024031	DANCR	KIAA0114
A10	N/A	ENST00000425189	DBH-AS1	DBH antisense RNA 1
A11	Hs.745484	NR_002770	DIO3OS	DIO3 opposite strand (non-protein coding)
A12	Hs.34969	NR_015448	DLX6-AS1	DLX6 antisense RNA 1
B01	Hs.436366	NR_034113	DNAJC27-AS1	Hypothetical LOC729723
B02	Hs.97540	NR_036580	DPP10-AS1	Hypothetical LOC389023
B03	N/A	ENST00000414938	EGOT	Eosinophil granule ontogeny transcript (non-protein coding)
B04	Hs.312592	NR_002791	EMX2OS	EMX2 opposite strand (non-protein coding)
B05	Hs.448825	NR_033925	FENDRR	Hypothetical LOC400550
B06	N/A	ENST00000445551	FOXD2-AS1	FOXD2 antisense RNA 1 (head to head)
B07	Hs.645410	NR_037676	FRMD6-AS1	Chromosome 14 open reading frame 82
B08	Hs.736055	NR_002578	GASS	Growth arrest-specific 5 (non-protein coding)
B09	Hs.568835	NR_024255	GATA3-AS1	Hypothetical LOC399717
B10	Hs.533566	NR_002196	H19	H19, imprinted maternally expressed transcript (non-protein coding)
B11	Hs.549606	NR_003244	HAR1A	Highly accelerated region 1A (non-protein coding)
B12	N/A	ENST00000447910	HAR1B	Highly accelerated region 1B (non-protein coding)
C01	Hs.197076	NR_003716	HOTAIR	Hox transcript antisense RNA (non-protein coding)
C02	N/A	ENST00000425358	HOTAIRM1	HOXA transcript antisense RNA, myeloid-specific 1
C03	N/A	ENST00000421733	HOTTIP	HOXA distal transcript antisense RNA
C04	Hs.587427	NR_002795	HOXA11-AS	HOXA11 antisense RNA 1 (non-protein coding)
C05	N/A	ENST00000517	HOXA-AS2	HOXA cluster antisense RNA 2

Position	UniGene	GenBank	Symbol	Description
		550		
C06	N/A	ENST00000518848	HOXA-AS3	HOXA cluster antisense RNA 3
C07	Hs.716962	NR_028043	IGF2-AS	Insulin-like growth factor 2 antisense
C08	N/A	NR_023915	IPW	Imprinted in Prader-Willi syndrome (non-protein coding)
C09	N/A	ENST00000414209	JPX	JPX transcript, XIST activator (non-protein coding)
C10	N/A	ENST00000419258	KCND3-AS1	KCND3 antisense RNA 1 [Source:HGNC Symbol;Acc:40317]
C11	N/A	NR_002813	KCNIP4-IT1	KCNIP4 intronic transcript 1 (non-protein coding)
C12	Hs.741312	NR_002728	KCNQ1OT1	KCNQ1 overlapping transcript 1 (non-protein coding)
D01	N/A	ENST00000443469	LAMP5-AS1	LAMP5 antisense RNA 1
D02	N/A	ENST00000423442	LINC00458	Long intergenic non-protein coding RNA 458
D03	N/A	ENST00000416894	LINC00568	Long intergenic non-protein coding RNA 568
D04	Hs.12513	NR_024281	LINC00599	Hypothetical LOC157627
D05	N/A	ENST00000414374	LINC01057	Long intergenic non-protein coding RNA 1057
D06	N/A	ENST00000427276	LINC01108	Long intergenic non-protein coding RNA 1108 [Source:HGNC Symbol;Acc:49234]
D07	N/A	ENST00000603837	LINC01109	Long intergenic non-protein coding RNA 1109 [Source:HGNC Symbol;Acc:49235]
D08	N/A	ENST00000433433	LINC01159	Long intergenic non-protein coding RNA 1159 [Source:HGNC Symbol;Acc:49514]
D09	N/A	ENST00000553704	LINC-ROR	Long intergenic non-protein coding RNA, regulator of reprogramming
D10	N/A	XR_243076	LOC101060553	Uncharacterized LOC101060553
D11	N/A	ENST00000558105	LOC101926895	Uncharacterized LOC101926895
D12	N/A	NR_026967	LOC143666	Uncharacterized LOC143666
E01	Hs.742325	XR_109661	LOC150051	Hypothetical LOC150051
E02	N/A	NR_026998	LOC91450	Uncharacterized LOC91450
E03	Hs.642877	NR_002819	MALAT1	Metastasis associated lung adenocarcinoma transcript 1 (non-protein coding)
E04	Hs.654863	NR_002766	MEG3	Maternally expressed 3 (non-protein coding)
E05	N/A	ENST00000429368	MEG9	Maternally expressed 9 (non-protein coding)
E06	Hs.517502	NR_003491	MIAT	Myocardial infarction associated transcript (non-protein coding)
E07	Hs.118820	NR_024388	NCBP2-AS2	Hypothetical LOC152217
E08	N/A	NR_028272	NEAT1	Nuclear paraspeckle assembly transcript 1 (non-protein coding)
E09	Hs.457407	NR_015369	NR2F1-AS1	Hypothetical LOC441094
E10	N/A	ENST00000500949	OIP5-AS1	OIP5 antisense RNA 1
E11	N/A	ENST00000414894	PRKCQ-AS1	PRKCQ antisense RNA 1
E12	N/A	NR_024037	RMST	Rhabdomyosarcoma 2 associated transcript (non-protein coding)
F01	N/A	ENST00000588294	RP11-104J23.1	RP11-104J23.1
F02	N/A	ENST00000588099	RP11-127I20.7	RP11-127I20.7
F03	N/A	ENST00000498457	RP11-292E2.1	RP11-292E2.1
F04	N/A	ENST00000420285	RP11-5P4.1	RP11-5P4.1
F05	N/A	ENST00000418091	RP11-5P4.2	RP11-5P4.2
F06	N/A	ENST00000574252	RP11-669E14.4	RP11-669E14.4
F07	N/A	ENST00000556602	RP11-932A10.1	RP11-932A10.1
F08	N/A	ENST00000553435	RP11-991C1.1	RP11-991C1.1
F09	N/A	ENST00000421143	SNAP25-AS1	SNAP25 antisense RNA 1
F10	Hs.741305	NR_003672	SNHG7	Small nucleolar RNA host gene 7 (non-protein coding)
F11	Hs.535762	NR_003584	SNHG8	Small nucleolar RNA host gene 8 (non-protein coding)
F12	N/A	ENST00000499137	SOCS2-AS1	SOCS2 antisense RNA 1
G01	N/A	ENST00000410	SOX2-OT	SOX2 overlapping transcript (non-protein coding)

Position	UniGene	GenBank	Symbol	Description
		534		
G02	N/A	ENST00000567594	SSSCA1-AS1	SSSCA1 antisense RNA 1 (head to head)
G03	Hs.515575	NR_027064	TINCR	Placenta-specific 2 (non-protein coding)
G04	N/A	ENST00000433265	TRIM52-AS1	TRIM52 antisense RNA 1 (head to head)
G05	N/A	ENST00000514459	TRPC7-AS1	TRPC7 antisense RNA 1 [Source:HGNC Symbol;Acc:40936]
G06	Hs.529901	NR_003255	TSIX	TSIX transcript, XIST antisense RNA (non-protein coding)
G07	Hs.554829	NR_002323	TUG1	Taurine upregulated 1 (non-protein coding)
G08	N/A	ENST00000503525	TUNAR	TCL1 upstream neural differentiation-associated RNA
G09	Hs.644234	NR_015379	UCA1	Urothelial cancer associated 1 (non-protein coding)
G10	Hs.567499	NR_023920	WT1-AS	WT1 antisense RNA (non-protein coding)
G11	Hs.529901	NR_001564	XIST	X (inactive)-specific transcript (non-protein coding)
G12	Hs.356766	NR_003604	ZFAS1	ZNF1 antisense RNA 1
H01	Hs.520640	NM_001101	ACTB	Actin, beta
H02	Hs.534255	NM_004048	B2M	Beta-2-microglobulin
H03	Hs.546285	NM_001002	RPLP0	Ribosomal protein, large, P0
H04	N/A	NR_001445	RN7SK	RNA, 7SK small nuclear
H05	N/A	NR_002907	SNORA73A	Small nucleolar RNA, H/ACA box 73A
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

Functional Gene Grouping:

Adult Neural Stem Cells: AIRN, FOXD2-AS1, KCND3-AS1, SIX3-AS1.

Cell-Fate Programming & Reprogramming: DLX6-AS1, FENDRR, CEBPA-AS1, HOTAIR, HOTAIRM1, HOTTIP, JPX, LINC01159, LINC-ROR, MEG3, SIX3-AS1, TINCR, TSIX, TUNAR, XIST.

Dendritic Cell Differentiation: ANKRD20A5P, RP11-292E2.1.

Embryonic & Induced Pluripotent Stem Cells: LINC01109, LINC-ROR, SOX2-OT, TSIX.

Embryonic Development: GAS5, LOC101926895, NCBP2-AS2, NR2F1-AS1, RP11-104J23.1, RP11-127I20.7, RP11-5P4.1, RP11-5P4.2, RP11-669E14.4, RP11-932A10.1, RP11-991C1.1, TRPC7-AS1, UCA1.

Embryonic Stem Cell Pluripotency & Differentiation: MALAT1, NEAT1, SNHG7, TSIX, TUG1.

Mesenchymal Stem Cells & Osteoblast Differentiation: MEG3.

Neurogenesis: ADAMTS9-AS2, BACE1-AS, BDNF-AS, DACT3-AS1, DBH-AS1, DIO3OS, DLX6-AS1, DNAJC27-AS1, DPP10-AS1, EMX2OS, FRMD6-AS1, H19, HAR1A, HAR1B, KCNIP4-IT1, KCNQ1OT1, LAMP5-AS1, LINC00458, LINC00599, LINC01057, LINC01108, LINC01109, LOC101060553, LOC143666, LOC150051, LOC91450, MALAT1, MIAT, NEAT1, OIP5-AS1, PRKCQ-AS1, SIX3-AS1, SNAP25-AS1, SNHG8, SOCS2-AS1, SSSCA1-AS1, TRIM52-AS1, TUG1, RMST.

Skeletal Muscle Development: H19, MALAT1, MEG3, NEAT1.

Known or Predicted Associations with Cell Differentiation & Development -Related miRNA: COX10-AS1, CROCCP2, EPB41L4A-AS1, LINC00116, LINC00493, LINC00657, MIR17HG, RP11-1134I14.8, SENP3-EIF4A1, SNHG15, TTC28-AS1.

Other Differentiation & Development Related lncRNAs: CRNDE, DANCR, EGOT, GATA3-AS1, HOXA11-AS, HOXA-AS2, HOXA-AS3, IGF2-AS, IPW, LINC00568, MEG9, WT1-AS, ZFAS1.

Related products

For optimal performance, RT² lncRNA 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 First Strand Kit (50)	Enzymes and reagents for cDNA synthesis	330404
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 lncRNA qPCR Assays	Laboratory-verified qPCR assays for lncRNA expression	Varies
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 lncRNA 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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