ExProfile™ Human Notch Signaling Related Gene qPCR Array

For focused group profiling of human notch signaling genes expression

Cat. No. QG043-A (1 x 96-well plate, Format A)
Cat. No. QG043-B (1 x 96-well plate, Format B)
Cat. No. QG043-C (1 x 96-well plate, Format C)
Cat. No. QG043-D (1 x 96-well plate, Format D)
Cat. No. QG043-E (1 x 96-well plate, Format E)

Plates available individually or as a set of 6. Each set contains 84 unique gene primer pairs deposited in one 96-well plate.

Introduction

The ExProfile human notch signaling related gene qPCR array profiles the expression of 84 human genes related to notch signaling pathway. These genes are carefully chosen for their close correlation based on a thorough literature search of peer-reviewed publications, mainly including genes involved in apoptosis, cell cycle, neurogenesis and the regulation of transcription, as well as genes involved in cell regulation, proliferation, and differentiation. This array allows researchers to study the related genes to gain understanding of their roles in the functioning and characterization of notch signaling pathway.

- QG043 plate 01: 84 unique gene PCR primer pairs

Shipping and storage condition

Shipped at room temperate
Stable for at least 6 months when stored at -20℃

Array format

GeneCopoeia provides five qPCR array formats (A, B, C, D, and E) suitable for use with the following real-time cyclers.

Important note: Upon receiving, please check to make sure that the correct array format was ordered to ensure the compatibility with your qPCR instrument.

Plate format	Instrument provider	qPCR instrument model
A (96-well)	Applied Biosystems	5700, 7000, 7300, 7500, 7700, 7900HT (Standard 96-well block), ViiA™7 (Standard 96-well block)
B (96-well)	Applied Biosystems	7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA™7 (Fast block)
C (96-well)	Bio-Rad Laboratories	iCycler iQ®, MyiQ™, iQ™5
D (96-well)	Bio-Rad Laboratories	CFX96™, DNA Engine Opticon™, DNA Engine Opticon 2™, Chromo4™
E (96-well)	Roche Applied Science	LightCycler® 480 (96-well block)

Quality control

1. Each pair of primers in the ExProfile gene qPCR array has been experimentally validated to yield a single dissociation curve peak and to generate a single amplicon of the correct size for the targeted gene.
2. The positive PCR controls (PCR) have been verified to amplify a single amplicon of the correct size with Ct values around **20±2**.
3. The Spike-in reverse transcription controls (RT) have been verified to amplify a single amplicon of the correct size with Ct values around **20±3**.
4. R^2 > 0.99 was observed for high inter/ intra-array reproducibility.

Materials required but not provided

All-in-One™ First-Strand cDNA Synthesis Kit
All-in-One™ qPCR Mix
Total RNA extraction kit (RNAzol® RT RNA extraction reagent is recommended)
DNase/RNase free tips, PCR reaction tubes, 1.5 ml microcentrifuge tubes
5 ml and 10 ml graduated pipettes, beakers, flasks, and cylinders
10 µl to 1,000 µl adjustable single channel micropipettes with disposable tips
5 µl to 20 µl adjustable multichannel micropipette, disposable tips, and reservoir
qPCR instrument, compatible with gene qPCR arrays ordered

Array layout

	1	2	3	4	5	6	7	8	9	10	11	12
A	PPARG	PDPK1	HPRT1	CD44	ZIC2	WNT11	WISP1	TLE1	TEAD1	STIL	SH2D1A	RUNX1
B	PSENEN	PPARG	POFUT1	PAX5	NR4A2	NFKB2	MYCL1	MMP7	MAP2K7	LOR	KRT1	IL2RA
C	IL17B	IFNG	HOXB4	GSK3B	GLI1	GBP2	ERBB2	CDC16	CD44	CCNE1	CBL	TGFB1
D	SUPT6H	SUFU	STAT6	STAT3	SNW1	SMO	SMAD2	SMAD1	SHH	SEL1L	RBPJ	PSEN1
E	POFUT1	PDPK1	PCAF	PAX6	NUMBL	NUMB	NOTCH3	NOTCH2	NOTCH1	NFKB2	NFKB1	NCSTN
F	MYC	MFNG	MAML3	JAG2	JAG1	IL6ST	HR	HEY1	HES1	HDAC2	HDAC1	GSK3B
G	GCN5L2	GATA3	FZD7	FZD6	FZD4	FZD3	FZD2	FZD1	FOSL1	FOS	FIGF	ERBB2
H	**HGDC**	**HGDC**	**GAPDH**	**ACTB**	**B2M**	**RPL13A**	**HPRT1**	**RN18S1**	**RT**	**RT**	**PCR**	**PCR**

Figure1. Illustration of QG043 plate 01

- **Gene primer pairs**: 84 wells (A row to G row) are designated for a real-time PCR assay for genes (see the primer list).
- **HK1-6**: Six pre-deposited housekeeping gene (HK1-6) primer pairs, which can be used as endogenous positive controls as well as for array normalization.
- **GDC**: Genomic DNA controls, which can be used to specifically detect genomic DNA contamination with a high level of sensitivity.
- **RT**: Spike-in reverse transcription controls, which can be used to monitor the efficiency of the RT reactions. These pre-deposited primer pairs specifically amplify the cDNA template reversed transcribed from the spike-in control RNA in the sample.
- **PCR**: Positive PCR controls, which are used to verify the PCR efficiency by amplifying the pre-deposited DNA template with its specific pre-deposited primer pairs.

Gene primer list

Plate	Position	Catalog No. of Primer	Accession No. of Gene	Symbol
QG043-01	A01	HQP013633	NM_005037	PPARG
QG043-01	A02	HQP012980	NM_031268	PDPK1
QG043-01	A03	HQP009026	NM_000194	HPRT1
QG043-01	A04	HQP022974	NM_001001390	CD44
QG043-01	A05	HQP018596	NM_007129	ZIC2
QG043-01	A06	HQP018539	NM_004626	WNT11
QG043-01	A07	HQP021610	NM_003882	WISP1
QG043-01	A08	HQP018104	NM_005077	TLE1
QG043-01	A09	HQP018003	NM_021961	TEAD1
QG043-01	A10	HQP017243	NM_003035	STIL
QG043-01	A11	HQP010936	NM_002351	SH2D1A
QG043-01	A12	HQP021347	NM_001754	RUNX1
QG043-01	B01	HQP014773	NM_172341	PSENEN
QG043-01	B02	HQP013634	NM_015869	PPARG
QG043-01	B03	HQP006158	NM_172236	POFUT1
QG043-01	B04	HQP012212	NM_016734	PAX5
QG043-01	B05	HQP011968	NM_006186	NR4A2
QG043-01	B06	HQP053985	NM_002502	NFKB2
QG043-01	B07	HQP011601	NM_005376	MYCL1
QG043-01	B08	HQP011258	NM_002423	MMP7
QG043-01	B09	HQP014926	NM_145185	MAP2K7
QG043-01	B10	HQP010809	NM_000427	LOR
QG043-01	B11	HQP010136	NM_006121	KRT1
QG043-01	B12	HQP009650	NM_000417	IL2RA
QG043-01	C01	HQP007583	NM_014443	IL17B
QG043-01	C02	HQP009467	NM_000619	IFNG
QG043-01	C03	HQP008990	NM_024015	HOXB4
QG043-01	C04	HQP054075	NM_002093	GSK3B
QG043-01	C05	HQP007701	NM_005269	GLI1
QG043-01	C06	HQP007223	NM_004120	GBP2
QG043-01	C07	HQP004969	NM_004448	ERBB2
QG043-01	C08	HQP053993	NM_003903	CDC16
QG043-01	C09	HQP022972	NM_000610	CD44
QG043-01	C10	HQP021819	NM_001238	CCNE1
QG043-01	C11	HQP021430	NM_005188	CBL
QG043-01	C12	HQP018044	NM_000660	TGFB1
QG043-01	D01	HQP017824	NM_003170	SUPT6H
QG043-01	D02	HQP012958	NM_016169	SUFU
QG043-01	D03	HQP017775	NM_003153	STAT6
QG043-01	D04	HQP017767	NM_003150	STAT3

QG043-01	D05	HQP005609	NM_012245	SNW1
QG043-01	D06	HQP017563	NM_005631	SMO
QG043-01	D07	HQP010959	NM_001003652	SMAD2
QG043-01	D08	HQP010958	NM_001003688	SMAD1
QG043-01	D09	HQP017098	NM_000193	SHH
QG043-01	D10	HQP016743	NM_005065	SEL1L
QG043-01	D11	HQP009574	NM_005349	RBPJ
QG043-01	D12	HQP015123	NM_000021	PSEN1
QG043-01	E01	HQP006157	NM_015352	POFUT1
QG043-01	E02	HQP012979	NM_002613	PDPK1
QG043-01	E03	HQP021621	NM_003884	PCAF
QG043-01	E04	HQP012219	NM_000280	PAX6
QG043-01	E05	HQP022406	NM_004756	NUMBL
QG043-01	E06	HQP021395	NM_001005743	NUMB
QG043-01	E07	HQP011876	NM_000435	NOTCH3
QG043-01	E08	HQP011875	NM_024408	NOTCH2
QG043-01	E09	HQP011873	NM_017617	NOTCH1
QG043-01	E10	HQP011808	NM_001077493	NFKB2
QG043-01	E11	HQP011807	NM_003998	NFKB1
QG043-01	E12	HQP006054	NM_015331	NCSTN
QG043-01	F01	HQP011597	NM_002467	MYC
QG043-01	F02	HQP011191	NM_002405	MFNG
QG043-01	F03	HQP014450	NM_018717	MAML3
QG043-01	F04	HQP009847	NM_002226	JAG2
QG043-01	F05	HQP004470	NM_000214	JAG1
QG043-01	F06	HQP009674	NM_002184	IL6ST
QG043-01	F07	HQP014725	NM_005144	HR
QG043-01	F08	HQP006121	NM_001040708	HEY1
QG043-01	F09	HQP009057	NM_005524	HES1
QG043-01	F10	HQP008746	NM_001527	HDAC2
QG043-01	F11	HQP008745	NM_004964	HDAC1
QG043-01	F12	HQP008469	NM_002093	GSK3B
QG043-01	G01	HQP007253	NM_021078	GCN5L2
QG043-01	G02	HQP007165	NM_001002295	GATA3
QG043-01	G03	HQP020136	NM_003507	FZD7
QG043-01	G04	HQP020135	NM_003506	FZD6
QG043-01	G05	HQP020134	NM_012193	FZD4
QG043-01	G06	HQP019238	NM_017412	FZD3
QG043-01	G07	HQP006492	NM_001466	FZD2
QG043-01	G08	HQP020133	NM_003505	FZD1
QG043-01	G09	HQP019708	NM_005438	FOSL1
QG043-01	G10	HQP006188	NM_005252	FOS
QG043-01	G11	HQP005451	NM_004469	FIGF
QG043-01	G12	HQP004968	NM_001005862	ERBB2
QG043-01	H01	HGDC		
QG043-01	H02	HGDC		

QG043-01	H03	HQP006940	NM_002046	GAPDH
QG043-01	H04	HQP016381	NM_001101	ACTB
QG043-01	H05	HQP015171	NM_004048	B2M
QG043-01	H06	HQP006171	NM_012423	RPL13A
QG043-01	H07	HQP009026	NM_000194	HPRT1
QG043-01	H08	HQP054253	NR_003286	RN18S1
QG043-01	H09	RT		
QG043-01	H10	RT		
QG043-01	H11	PCR		
QG043-01	H12	PCR		

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