

ExProfile™ Human Signal Transduction Related Gene qPCR Array

For focused group profiling of human signal transduction related gene expression

Cat. No. QG051-A (1 x 96-well plate, Format A)

Cat. No. QG051-B (1 x 96-well plate, Format B)

Cat. No. QG051-C (1 x 96-well plate, Format C)

Cat. No. QG051-D (1 x 96-well plate, Format D)

Cat. No. QG051-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 signal transduction related gene qPCR array profiles the expression of 84 human genes considered important in many different signal transduction pathways. These genes are carefully chosen for their close pathway correlation based on a thorough literature search of peer-reviewed publications. This array allows researchers to study pathway-related genes to gain understanding of their roles in particular biological responses.

- QG051 plate 01: 84 unique gene PCR primer pairs

Shipping and storage conditions

Shipped at room temperature

Stable for at least 6 months when stored at -20°C

Array format

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

Important note: Upon receipt, please check to make sure that the correct array format was ordered to ensure 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	ATF2	BAX	BCL2	BCL2A1	BCL2L1	NAIP	BIRC2	BIRC3	BMP2	BMP4	BRCA1	CCL2
B	CCL20	CCND1	CD5	CDK2	CDKN1A	CDKN1B	CDKN2A	CSF2	CXCL9	CYP19A1	EGR1	FAS
C	FASLG	FASN	FN1	FOS	FOXA2	GADD45A	GREB1	GYS1	HK2	HOXA1	HSF1	HSPB1
D	ICAM1	IGFBP3	IKBKB	IL1A	IL2	IL4	IL4R	IL8	IRF1	JUN	LEF1	LEP
E	LTA	MDM2	MMP10	MMP7	MYC	NFKB1	NOS2A	NRIP1	ODC1	PECAM1	PPARG	PRKCA
F	PTCH1	PTGS2	RBP1	SELE	SELPLG	TANK	TCF7	TFRC	TMEPAI	TNF	TP53	TP53I3
G	VCAM1	VEGFA	WISP1	WNT1	WNT2	HPRT1	TANK	TCF7	MDM2	CEBPB	EN1	PRKCE
H	HGDC	HGDC	GAPDH	ACTB	B2M	RPL13A	HPRT1	RN18S1	RT	RT	PCR	PCR

Figure1. Illustration of QG051 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 reverse 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
QG051-01	A01	HQP002912	NM_001880	ATF2
QG051-01	A02	HQP015964	NM_004324	BAX
QG051-01	A03	HQP016211	NM_000633	BCL2
QG051-01	A04	HQP016222	NM_004049	BCL2A1
QG051-01	A05	HQP016238	NM_138578	BCL2L1
QG051-01	A06	HQP011670	NM_004536	NAIP
QG051-01	A07	HQP009072	NM_001166	BIRC2
QG051-01	A08	HQP009084	NM_001165	BIRC3
QG051-01	A09	HQP017333	NM_001200	BMP2
QG051-01	A10	HQP053910	NM_130851	BMP4
QG051-01	A11	HQP017713	NM_007294	BRCA1
QG051-01	A12	HQP016621	NM_002982	CCL2
QG051-01	B01	HQP016639	NM_004591	CCL20
QG051-01	B02	HQP016204	NM_053056	CCND1
QG051-01	B03	HQP022337	NM_014207	CD5
QG051-01	B04	HQP000225	NM_001798	CDK2
QG051-01	B05	HQP000331	NM_000389	CDKN1A
QG051-01	B06	HQP000342	NM_004064	CDKN1B
QG051-01	B07	HQP000369	NM_000077	CDKN2A
QG051-01	B08	HQP003159	NM_000758	CSF2
QG051-01	B09	HQP011220	NM_002416	CXCL9
QG051-01	B10	HQP003904	NM_000103	CYP19A1
QG051-01	B11	HQP004612	NM_001964	EGR1
QG051-01	B12	HQP009651	NM_000043	FAS
QG051-01	C01	HQP009671	NM_000639	FASLG
QG051-01	C02	HQP005134	NM_004104	FASN
QG051-01	C03	HQP006022	NM_002026	FN1
QG051-01	C04	HQP006188	NM_005252	FOS
QG051-01	C05	HQP008906	NM_021784	FOXA2
QG051-01	C06	HQP004125	NM_001924	GADD45A
QG051-01	C07	HQP023078	NM_014668	GREB1
QG051-01	C08	HQP008653	NM_002103	GYS1
QG051-01	C09	HQP008843	NM_000189	HK2
QG051-01	C10	HQP008966	NM_005522	HOXA1
QG051-01	C11	HQP009068	NM_005526	HSF1
QG051-01	C12	HQP009089	NM_001540	HSPB1
QG051-01	D01	HQP009184	NM_000201	ICAM1
QG051-01	D02	HQP009544	NM_000598	IGFBP3
QG051-01	D03	HQP009639	NM_001556	IKBKB
QG051-01	D04	HQP009640	NM_000575	IL1A
QG051-01	D05	HQP009649	NM_000586	IL2

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QG051-01	D06	HQP009662	NM_000589	IL4
QG051-01	D07	HQP009664	NM_000418	IL4R
QG051-01	D08	HQP009678	NM_000584	IL8
QG051-01	D09	HQP009778	NM_002198	IRF1
QG051-01	D10	HQP009853	NM_002228	JUN
QG051-01	D11	HQP012480	NM_016269	LEF1
QG051-01	D12	HQP010581	NM_000230	LEP
QG051-01	E01	HQP010907	NM_000595	LTA
QG051-01	E02	HQP011135	NM_002392	MDM2
QG051-01	E03	HQP011264	NM_002425	MMP10
QG051-01	E04	HQP011258	NM_002423	MMP7
QG051-01	E05	HQP011597	NM_002467	MYC
QG051-01	E06	HQP011807	NM_003998	NFKB1
QG051-01	E07	HQP011866	NM_000625	NOS2A
QG051-01	E08	HQP020042	NM_003489	NRIP1
QG051-01	E09	HQP012013	NM_002539	ODC1
QG051-01	E10	HQP013015	NM_000442	PECAM1
QG051-01	E11	HQP013634	NM_015869	PPARG
QG051-01	E12	HQP014706	NM_002737	PRKCA
QG051-01	F01	HQP015530	NM_000264	PTCH1
QG051-01	F02	HQP015598	NM_000963	PTGS2
QG051-01	F03	HQP016190	NM_002899	RBP1
QG051-01	F04	HQP016744	NM_000450	SELE
QG051-01	F05	HQP016747	NM_003006	SELPLG
QG051-01	F06	HQP000019	NM_004180	TANK
QG051-01	F07	HQP017958	NM_003202	TCF7
QG051-01	F08	HQP018041	NM_003234	TFRC
QG051-01	F09	HQP015258	NM_020182	TMEPAI
QG051-01	F10	HQP018141	NM_000594	TNF
QG051-01	F11	HQP018175	NM_000546	TP53
QG051-01	F12	HQP022884	NM_004881	TP53I3
QG051-01	G01	HQP053975	NM_001078	VCAM1
QG051-01	G02	HQP018481	NM_003376	VEGFA
QG051-01	G03	HQP021610	NM_003882	WISP1
QG051-01	G04	HQP018528	NM_005430	WNT1
QG051-01	G05	HQP018529	NM_003391	WNT2
QG051-01	G06	HQP009026	NM_000194	HPRT1
QG051-01	G07	HQP000020	NM_133484	TANK
QG051-01	G08	HQP017959	NM_201632	TCF7
QG051-01	G09	HQP011136	NM_006878	MDM2
QG051-01	G10	HQP000623	NM_005194	CEBPB
QG051-01	G11	HQP004846	NM_001426	EN1
QG051-01	G12	HQP014742	NM_005400	PRKCE
QG051-01	H01	HGDC		
QG051-01	H02	HGDC		
QG051-01	H03	HQP006940	NM_002046	GAPDH
QG051-01	H04	HQP016381	NM_001101	ACTB

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QG051-01	H05	HQP015171	NM_004048	B2M
QG051-01	H06	HQP006171	NM_012423	RPL13A
QG051-01	H07	HQP009026	NM_000194	HPRT1
QG051-01	H08	HQP054253	NR_003286	RN18S1
QG051-01	H09	RT		
QG051-01	H10	RT		
QG051-01	H11	PCR		
QG051-01	H12	PCR		

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Following terms and conditions apply to use of ExProfile™ Human Signal Transduction Related Gene qPCR Array (the Product). If the terms and conditions are not acceptable, the Product in its entirety must be returned to GeneCopoeia within 5 calendar days. A limited End-User license is granted to the purchaser of the Product. The Product shall be used by the purchaser for internal research purposes only. The Product is expressly not designed, intended, or warranted for use in humans or for therapeutic or diagnostic use. The Product must not be resold, repackaged or modified for resale, or used to manufacture commercial products or deliver information obtained in service without prior written consent from GeneCopoeia. This Product should be used in accordance with the NIH guidelines developed for recombinant DNA and genetic research. Use of any part of the Product constitutes acceptance of the above terms.

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GeneCopoeia, Inc.
9620 Medical Center Drive, Suite 101
Rockville, MD 20850
+1 (301) 762-0888
+1 (866) 360-9531
inquiry@genecopoeia.com

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