

ExProfile™ Human Growth Factor Related Gene qPCR Array

For focused group profiling of human growth factor genes expression

Cat. No. QG088-A (1 x 96-well plate, Format A)

Cat. No. QG088-B (1 x 96-well plate, Format B)

Cat. No. QG088-C (1 x 96-well plate, Format C)

Cat. No. QG088-D (1 x 96-well plate, Format D)

Cat. No. QG088-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 growth factors related gene qPCR array profiles the expression of 84 human genes related to growth factors. These genes are carefully chosen for their close pathway correlation based on a thorough literature search of peer-reviewed publications, mainly including genes that play important roles in various biological processes, such as cell differentiation, apoptosis, embryogenesis and tissue-specific development. This array allows researchers to study the related genes to gain understanding of their roles in the functioning and characterization of biological processes.

- QG088 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°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 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	LTBP4	NRG1	CSF1	CECR1	HPRT1	VEGFC	VEGFA	THPO	TGFB1	TDGF1	SPP1	PDGFC
B	OSGIN1	NTF3	NRG2	NRG1	NODAL	NGFB	LIF	LEFTY2	LEFTY1	JAG2	JAG1	INHBB
C	INHBA	INHHA	IL4	IL2	IL1B	IL1A	IL18	IL12B	IL10	IGF2	IGF1	HBEGF
D	GPI	GDNF	GDF8	GDF11	FIGF	FGF9	FGF7	FGF5	FGF2	FGF17	FGF14	FGF11
E	FGF1	EREG	ECGF1	DKK1	CXCL1	CSF3	CSF2	CSF1	CLC	CECR1	BMP8B	BMP7
F	BMP5	BMP4	BMP3	BMP2	BMP10	BMP1	FGF5	NDP	PSPN	TNNT1	AMH	ARTS-1
G	BDNF	PGF	FGF13	FGF19	FGF22	FGF23	GDF10	IL11	IL3	LTBP4	MDK	NRG3
H	HGDC	HGDC	GAPDH	ACTB	B2M	RPL13A	HPRT1	RN18S1	RT	RT	PCR	PCR

Figure1. Illustration of QG088 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
QG088-01	A01	HQP020596	NM_001042544	LTBP4
QG088-01	A02	HQP008818	NM_004495	NRG1
QG088-01	A03	HQP003150	NM_172210	CSF1
QG088-01	A04	HQP013043	NM_017424	CECR1
QG088-01	A05	HQP009026	NM_000194	HPRT1
QG088-01	A06	HQP018483	NM_005429	VEGFC
QG088-01	A07	HQP018481	NM_003376	VEGFA
QG088-01	A08	HQP018074	NM_000460	THPO
QG088-01	A09	HQP018044	NM_000660	TGFB1
QG088-01	A10	HQP017997	NM_003212	TDGF1
QG088-01	A11	HQP017673	NM_000582	SPP1
QG088-01	A12	HQP014905	NM_016205	PDGFC
QG088-01	B01	HQP054039	NM_182981	OSGIN1
QG088-01	B02	HQP011933	NM_002527	NTF3
QG088-01	B03	HQP022888	NM_013982	NRG2
QG088-01	B04	HQP008820	NM_013957	NRG1
QG088-01	B05	HQP011861	NM_018055	NODAL
QG088-01	B06	HQP011827	NM_002506	NGFB
QG088-01	B07	HQP010607	NM_002309	LIF
QG088-01	B08	HQP018049	NM_003240	LEFTY2
QG088-01	B09	HQP000772	NM_020997	LEFTY1
QG088-01	B10	HQP009847	NM_002226	JAG2
QG088-01	B11	HQP004470	NM_000214	JAG1

QG088-01	B12	HQP009744	NM_002193	INHBB
QG088-01	C01	HQP009743	NM_002192	INHBA
QG088-01	C02	HQP009742	NM_002191	INHA
QG088-01	C03	HQP009662	NM_000589	IL4
QG088-01	C04	HQP009649	NM_000586	IL2
QG088-01	C05	HQP009641	NM_000576	IL1B
QG088-01	C06	HQP009640	NM_000575	IL1A
QG088-01	C07	HQP009718	NM_001562	IL18
QG088-01	C08	HQP009693	NM_002187	IL12B
QG088-01	C09	HQP009685	NM_000572	IL10
QG088-01	C10	HQP009529	NM_000612	IGF2
QG088-01	C11	HQP009518	NM_000618	IGF1
QG088-01	C12	HQP004493	NM_001945	HBEGF
QG088-01	D01	HQP007814	NM_000175	GPI
QG088-01	D02	HQP007346	NM_000514	GDNF
QG088-01	D03	HQP007323	NM_005259	GDF8
QG088-01	D04	HQP000275	NM_005811	GDF11
QG088-01	D05	HQP005451	NM_004469	FIGF
QG088-01	D06	HQP005416	NM_002010	FGF9
QG088-01	D07	HQP005411	NM_002009	FGF7
QG088-01	D08	HQP005408	NM_004464	FGF5
QG088-01	D09	HQP005403	NM_002006	FGF2
QG088-01	D10	HQP021583	NM_003867	FGF17
QG088-01	D11	HQP005424	NM_004115	FGF14
QG088-01	D12	HQP005419	NM_004112	FGF11
QG088-01	E01	HQP005400	NM_000800	FGF1

QG088-01	E02	HQP004978	NM_001432	EREG
QG088-01	E03	HQP004538	NM_001953	ECGF1
QG088-01	E04	HQP005612	NM_012242	DKK1
QG088-01	E05	HQP008456	NM_001511	CXCL1
QG088-01	E06	HQP003173	NM_000759	CSF3
QG088-01	E07	HQP003159	NM_000758	CSF2
QG088-01	E08	HQP003149	NM_000757	CSF1
QG088-01	E09	HQP001978	NM_001828	CLC
QG088-01	E10	HQP013044	NM_177405	CECR1
QG088-01	E11	HQP017477	NM_001720	BMP8B
QG088-01	E12	HQP017467	NM_001719	BMP7
QG088-01	F01	HQP017433	NM_021073	BMP5
QG088-01	F02	HQP053910	NM_130851	BMP4
QG088-01	F03	HQP017357	NM_001201	BMP3
QG088-01	F04	HQP017333	NM_001200	BMP2
QG088-01	F05	HQP007656	NM_014482	BMP10
QG088-01	F06	HQP017282	NM_006129	BMP1
QG088-01	F07	HQP005409	NM_033143	FGF5
QG088-01	F08	HQP011700	NM_000266	NDP
QG088-01	F09	HQP015033	NM_004158	PSPN
QG088-01	F10	HQP018154	NM_003283	TNNT1
QG088-01	F11	HQP007394	NM_000479	AMH
QG088-01	F12	HQP013010	NM_016442	ARTS-1
QG088-01	G01	HQP016545	NM_001709	BDNF
QG088-01	G02	HQP013089	NM_002632	PGF
QG088-01	G03	HQP005422	NM_004114	FGF13

QG088-01	G04	HQP023416	NM_005117	FGF19
QG088-01	G05	HQP007429	NM_020637	FGF22
QG088-01	G06	HQP019743	NM_020638	FGF23
QG088-01	G07	HQP007326	NM_004962	GDF10
QG088-01	G08	HQP009688	NM_000641	IL11
QG088-01	G09	HQP009660	NM_000588	IL3
QG088-01	G10	HQP020598	NM_003573	LTBP4
QG088-01	G11	HQP053984	NM_002391	MDK
QG088-01	G12	HQP000852	NM_001010848	NRG3
QG088-01	H01	HGDC		
QG088-01	H02	HGDC		
QG088-01	H03	HQP006940	NM_002046	GAPDH
QG088-01	H04	HQP016381	NM_001101	ACTB
QG088-01	H05	HQP015171	NM_004048	B2M
QG088-01	H06	HQP006171	NM_012423	RPL13A
QG088-01	H07	HQP009026	NM_000194	HPRT1
QG088-01	H08	HQP054253	NR_003286	RN18S1
QG088-01	H09	RT		
QG088-01	H10	RT		
QG088-01	H11	PCR		
QG088-01	H12	PCR		

Limited Use License

Following terms and conditions apply to use of ExProfile™ Human Groth Factor 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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