ExProfile™ Human Angiogenesis Related Gene qPCR Array

For focused group profiling of human angiogenesis genes expression

Cat. No. QG002-A (1 x 96-well plate, Format A)
Cat. No. QG002-B (1 x 96-well plate, Format B)
Cat. No. QG002-C (1 x 96-well plate, Format C)
Cat. No. QG002-D (1 x 96-well plate, Format D)
Cat. No. QG002-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 angiogenesis related gene qPCR array profiles the expression of 84 human genes related to angiogenesis. These genes are carefully chosen for their close correlation based on a thorough literature search of peer-reviewed publications, mainly including genes that encode various angiogenic factors and other molecules involved in angiogenesis. This array allows researchers to study the related genes to gain understanding of their roles in the functioning and characterization of angiogenesis.

- QG002 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	HGF	COL18A1	HGF	NRP2	HPRT1	VEGFC	VEGFA	TNFAIP2	TNF	TIMP3	TIMP2	TIMP1
B	THBS2	THBS1	TGFBR1	TGFB2	TGFB1	TGFA	TEK	STAB1	SPHK1	SERPINF1	PTGS1	PROK2
C	PLXDC1	PLG	PLAU	PECAM1	PDGFA	NRP2	NRP1	MMP9	LEP	KDR	JAG1	ITGB3
D	ITGAV	IL8	IL6	IL1B	IGF1	IFNG	IFNB1	IFNA1	ID3	ID1	HPSE	HIF1A
E	HGF	HAND2	FLT1	FIGF	FGFR3	FGF2	FGF1	EREG	EPHB4	ENG	EGF	EFNB2
F	EFNA3	EFNA1	EDG1	ECGF1	CXCL9	CXCL6	CXCL5	CXCL3	CXCL10	CXCL1	CDH5	CCL2
G	CCL11	BAI1	ANPEP	ANGPTL4	ANGPTL3	ANGPT2	AKT1	ANGPT1	COL18A1	COL4A3	PF4	LECT1
H	**HGDC**	**HGDC**	**GAPDH**	**ACTB**	**B2M**	**RPL13A**	**HPRT1**	**RN18S1**	**RT**	**RT**	**PCR**	**PCR**

Figure1. Illustration of QG002 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
QG002-01	A01	HQP008801	NM_001010931	HGF
QG002-01	A02	HQP019768	NM_130445	COL18A1
QG002-01	A03	HQP008804	NM_001010934	HGF
QG002-01	A04	HQP021591	NM_201264	NRP2
QG002-01	A05	HQP009026	NM_000194	HPRT1
QG002-01	A06	HQP018483	NM_005429	VEGFC
QG002-01	A07	HQP018481	NM_003376	VEGFA
QG002-01	A08	HQP018144	NM_006291	TNFAIP2
QG002-01	A09	HQP018141	NM_000594	TNF
QG002-01	A10	HQP018094	NM_000362	TIMP3
QG002-01	A11	HQP018093	NM_003255	TIMP2
QG002-01	A12	HQP018092	NM_003254	TIMP1
QG002-01	B01	HQP018069	NM_003247	THBS2
QG002-01	B02	HQP018068	NM_003246	THBS1
QG002-01	B03	HQP018051	NM_004612	TGFBR1
QG002-01	B04	HQP018047	NM_003238	TGFB2
QG002-01	B05	HQP018044	NM_000660	TGFB1
QG002-01	B06	HQP018043	NM_003236	TGFA
QG002-01	B07	HQP018012	NM_000459	TEK
QG002-01	B08	HQP005820	NM_015136	STAB1
QG002-01	B09	HQP021658	NM_021972	SPHK1
QG002-01	B10	HQP013026	NM_002615	SERPINF1
QG002-01	B11	HQP015596	NM_000962	PTGS1
QG002-01	B12	HQP016353	NM_021935	PROK2
QG002-01	C01	HQP015418	NM_020405	PLXDC1
QG002-01	C02	HQP013257	NM_000301	PLG
QG002-01	C03	HQP013204	NM_002658	PLAU
QG002-01	C04	HQP013015	NM_000442	PECAM1
QG002-01	C05	HQP012847	NM_002607	PDGFA
QG002-01	C06	HQP021589	NM_003872	NRP2
QG002-01	C07	HQP021597	NM_003873	NRP1
QG002-01	C08	HQP011263	NM_004994	MMP9
QG002-01	C09	HQP010581	NM_000230	LEP
QG002-01	C10	HQP010070	NM_002253	KDR
QG002-01	C11	HQP004470	NM_000214	JAG1
QG002-01	C12	HQP009818	NM_000212	ITGB3
QG002-01	D01	HQP009808	NM_002210	ITGAV

QG002-01	D02	HQP009678	NM_000584	IL8
QG002-01	D03	HQP009670	NM_000600	IL6
QG002-01	D04	HQP009641	NM_000576	IL1B
QG002-01	D05	HQP009518	NM_000618	IGF1
QG002-01	D06	HQP009467	NM_000619	IFNG
QG002-01	D07	HQP009463	NM_002176	IFNB1
QG002-01	D08	HQP009419	NM_024013	IFNA1
QG002-01	D09	HQP009282	NM_002167	ID3
QG002-01	D10	HQP009266	NM_002165	ID1
QG002-01	D11	HQP000974	NM_006665	HPSE
QG002-01	D12	HQP008831	NM_001530	HIF1A
QG002-01	E01	HQP008800	NM_000601	HGF
QG002-01	E02	HQP022788	NM_021973	HAND2
QG002-01	E03	HQP005879	NM_002019	FLT1
QG002-01	E04	HQP005451	NM_004469	FIGF
QG002-01	E05	HQP005434	NM_000142	FGFR3
QG002-01	E06	HQP005403	NM_002006	FGF2
QG002-01	E07	HQP005400	NM_000800	FGF1
QG002-01	E08	HQP004978	NM_001432	EREG
QG002-01	E09	HQP004945	NM_004444	EPHB4
QG002-01	E10	HQP004856	NM_000118	ENG
QG002-01	E11	HQP004599	NM_001963	EGF
QG002-01	E12	HQP004597	NM_004093	EFNB2
QG002-01	F01	HQP004591	NM_004952	EFNA3
QG002-01	F02	HQP004589	NM_182685	EFNA1
QG002-01	F03	HQP004554	NM_001400	EDG1
QG002-01	F04	HQP004538	NM_001953	ECGF1
QG002-01	F05	HQP011220	NM_002416	CXCL9
QG002-01	F06	HQP016648	NM_002993	CXCL6
QG002-01	F07	HQP016650	NM_002994	CXCL5
QG002-01	F08	HQP008459	NM_002090	CXCL3
QG002-01	F09	HQP009746	NM_001565	CXCL10
QG002-01	F10	HQP008456	NM_001511	CXCL1
QG002-01	F11	HQP000052	NM_001795	CDH5
QG002-01	F12	HQP016621	NM_002982	CCL2
QG002-01	G01	HQP016629	NM_002986	CCL11
QG002-01	G02	HQP015745	NM_001702	BAI1
QG002-01	G03	HQP008414	NM_001150	ANPEP
QG002-01	G04	HQP012432	NM_001039667	ANGPTL4
QG002-01	G05	HQP007675	NM_014495	ANGPTL3
QG002-01	G06	HQP008202	NM_001147	ANGPT2

QG002-01	G07	HQP054002	NM_005163	AKT1
QG002-01	G08	HQP008097	NM_001146	ANGPT1
QG002-01	G09	HQP019767	NM_030582	COL18A1
QG002-01	G10	HQP002508	NM_000091	COL4A3
QG002-01	G11	HQP013057	NM_002619	PF4
QG002-01	G12	HQP001209	NM_007015	LECT1
QG002-01	H01	HGDC		
QG002-01	H02	HGDC		
QG002-01	H03	HQP006940	NM_002046	GAPDH
QG002-01	H04	HQP016381	NM_001101	ACTB
QG002-01	H05	HQP015171	NM_004048	B2M
QG002-01	H06	HQP006171	NM_012423	RPL13A
QG002-01	H07	HQP009026	NM_000194	HPRT1
QG002-01	H08	HQP054253	NR_003286	RN18S1
QG002-01	H09	RT		
QG002-01	H10	RT		
QG002-01	H11	PCR		
QG002-01	H12	PCR		

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