

## ExProfile™ Human Angiogenic Growth Factors & Angiogenesis Inhibitors Related Gene qPCR Array

For focused group profiling of human angiogenic growth factors and angiogenesis inhibitors genes expression

Cat. No. QG019-A (1 x 96-well plate, Format A)

Cat. No. QG019-B (1 x 96-well plate, Format B)

Cat. No. QG019-C (1 x 96-well plate, Format C)

Cat. No. QG019-D (1 x 96-well plate, Format D)

Cat. No. QG019-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 angiogenic growth factors and angiogenesis inhibitors 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 angiogenic growth factors, inhibitors, and their related genes. This array allows researchers to study the related genes to gain understanding of their roles in the promotion and inhibition of angiogenesis.

- QG019 plate 01: 84 unique gene PCR primer pairs

### Shipping and storage condition

Shipped at room temperature

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

### Array format

GeneCopia 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	FN1	FGF1	COL18A1	HGF	HGF	HPRT1	VEGFA	TNNI3	TNNI2	TNF	TIMP3	TIMP2
B	TIMP1	TIE1	THBS1	TGFB1	TGFA	STAB1	SPINK5	SERPINF1	SERPINE1	SERPINC1	RUNX1	RNH1
C	PRL	PPBP	PLG	PDGFD	PDGFB	LEP	KLK3	KITLG	IL8	IL6	IL17F	IL12B
D	IL12A	IL10	IFNG	IFNB1	IFNA1	HGF	GRP	FN1	FIGF	FGFBP1	FGF2	FGF1
E	EREG	ECGF1	CXCL9	CXCL6	CXCL5	CXCL3	CXCL2	CXCL14	CXCL13	CXCL12	CXCL11	CXCL10
F	CSF3	CHGA	CD59	CD55	CCL2	CCL15	BTG1	BMP2	BAI1	ANGPTL1	ANGPT2	ANG
G	AMOT	AGGF1	PF4	PGF	ANGPT1	PROK1	COL4A3	FGF13	GRN	MDK	NPPB	RHOB
H	HGDC	HGDC	GAPDH	ACTB	B2M	RPL13A	HPRT1	RN18S1	RT	RT	PCR	PCR

Figure1. Illustration of QG019 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
QG019-01	A01	HQP006023	NM_054034	FN1
QG019-01	A02	HQP005401	NM_033136	FGF1
QG019-01	A03	HQP019768	NM_130445	COL18A1
QG019-01	A04	HQP008804	NM_001010934	HGF
QG019-01	A05	HQP008801	NM_001010931	HGF
QG019-01	A06	HQP009026	NM_000194	HPRT1
QG019-01	A07	HQP018481	NM_003376	VEGFA
QG019-01	A08	HQP018153	NM_000363	TNNI3
QG019-01	A09	HQP018152	NM_003282	TNNI2
QG019-01	A10	HQP018141	NM_000594	TNF
QG019-01	A11	HQP018094	NM_000362	TIMP3
QG019-01	A12	HQP018093	NM_003255	TIMP2
QG019-01	B01	HQP018092	NM_003254	TIMP1
QG019-01	B02	HQP018091	NM_005424	TIE1
QG019-01	B03	HQP018068	NM_003246	THBS1
QG019-01	B04	HQP018044	NM_000660	TGFB1
QG019-01	B05	HQP018043	NM_003236	TGFA
QG019-01	B06	HQP005820	NM_015136	STAB1
QG019-01	B07	HQP001140	NM_006846	SPINK5
QG019-01	B08	HQP013026	NM_002615	SERPINF1
QG019-01	B09	HQP012154	NM_000602	SERPINE1
QG019-01	B10	HQP011620	NM_000488	SERPINC1
QG019-01	B11	HQP021347	NM_001754	RUNX1
QG019-01	B12	HQP016332	NM_002939	RNH1
QG019-01	C01	HQP015024	NM_000948	PRL
QG019-01	C02	HQP013662	NM_002704	PPBP
QG019-01	C03	HQP013257	NM_000301	PLG
QG019-01	C04	HQP019651	NM_025208	PDGFD
QG019-01	C05	HQP012856	NM_002608	PDGFB
QG019-01	C06	HQP010581	NM_000230	LEP
QG019-01	C07	HQP009637	NM_001648	KLK3
QG019-01	C08	HQP011205	NM_003994	KITLG
QG019-01	C09	HQP009678	NM_000584	IL8
QG019-01	C10	HQP009670	NM_000600	IL6
QG019-01	C11	HQP001495	NM_052872	IL17F
QG019-01	C12	HQP009693	NM_002187	IL12B
QG019-01	D01	HQP009692	NM_000882	IL12A
QG019-01	D02	HQP009685	NM_000572	IL10
QG019-01	D03	HQP009467	NM_000619	IFNG
QG019-01	D04	HQP009463	NM_002176	IFNB1
QG019-01	D05	HQP009419	NM_024013	IFNA1
QG019-01	D06	HQP008800	NM_000601	HGF

QG019-01	D07	HQP008462	NM_002091	GRP
QG019-01	D08	HQP006022	NM_002026	FN1
QG019-01	D09	HQP005451	NM_004469	FIGF
QG019-01	D10	HQP023445	NM_005130	FGFBP1
QG019-01	D11	HQP005403	NM_002006	FGF2
QG019-01	D12	HQP005400	NM_000800	FGF1
QG019-01	E01	HQP004978	NM_001432	EREG
QG019-01	E02	HQP004538	NM_001953	ECGF1
QG019-01	E03	HQP011220	NM_002416	CXCL9
QG019-01	E04	HQP016648	NM_002993	CXCL6
QG019-01	E05	HQP016650	NM_002994	CXCL5
QG019-01	E06	HQP008459	NM_002090	CXCL3
QG019-01	E07	HQP008458	NM_002089	CXCL2
QG019-01	E08	HQP022893	NM_004887	CXCL14
QG019-01	E09	HQP000672	NM_006419	CXCL13
QG019-01	E10	HQP016669	NM_000609	CXCL12
QG019-01	E11	HQP016649	NM_005409	CXCL11
QG019-01	E12	HQP009746	NM_001565	CXCL10
QG019-01	F01	HQP003173	NM_000759	CSF3
QG019-01	F02	HQP001309	NM_001275	CHGA
QG019-01	F03	HQP023056	NM_000611	CD59
QG019-01	F04	HQP003948	NM_000574	CD55
QG019-01	F05	HQP016621	NM_002982	CCL2
QG019-01	F06	HQP054027	NM_032965	CCL15
QG019-01	F07	HQP017983	NM_001731	BTG1
QG019-01	F08	HQP017333	NM_001200	BMP2
QG019-01	F09	HQP015745	NM_001702	BAI1
QG019-01	F10	HQP022013	NM_004673	ANGPTL1
QG019-01	F11	HQP008202	NM_001147	ANGPT2
QG019-01	F12	HQP007968	NM_001145	ANG
QG019-01	G01	HQP003781	NM_133265	AMOT
QG019-01	G02	HQP014059	NM_018046	AGGF1
QG019-01	G03	HQP013057	NM_002619	PF4
QG019-01	G04	HQP013089	NM_002632	PGF
QG019-01	G05	HQP008097	NM_001146	ANGPT1
QG019-01	G06	HQP020717	NM_032414	PROK1
QG019-01	G07	HQP002508	NM_000091	COL4A3
QG019-01	G08	HQP005422	NM_004114	FGF13
QG019-01	G09	HQP008330	NM_002087	GRN
QG019-01	G10	HQP053984	NM_002391	MDK
QG019-01	G11	HQP011897	NM_002521	NPPB
QG019-01	G12	HQP010327	NM_004040	RHOB
QG019-01	H01	HGDC		
QG019-01	H02	HGDC		
QG019-01	H03	HQP006940	NM_002046	GAPDH
QG019-01	H04	HQP016381	NM_001101	ACTB

QG019-01	H05	HQP015171	NM_004048	B2M
QG019-01	H06	HQP006171	NM_012423	RPL13A
QG019-01	H07	HQP009026	NM_000194	HPRT1
QG019-01	H08	HQP054253	NR_003286	RN18S1
QG019-01	H09	RT		
QG019-01	H10	RT		
QG019-01	H11	PCR		
QG019-01	H12	PCR		

---

### Limited Use License

Following terms and conditions apply to use of ExProfile™ Human Angiogenic Growth Factors & Angiogenesis Inhibitors 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.

### Limited Warranty

GeneCopoeia warrants that the Product meets the specifications described in the accompanying Product Datasheet. If it is proven to the satisfaction of GeneCopoeia that the Product fails to meet these specifications, GeneCopoeia will replace the Product. In the event a replacement cannot be provided, GeneCopoeia will provide the purchaser with a refund. This limited warranty shall not extend to anyone other than the original purchaser of the Product. Notice of nonconforming products must be made to GeneCopoeia within 30 days of receipt of the Product. GeneCopoeia's liability is expressly limited to replacement of Product or a refund limited to the actual purchase price.

GeneCopoeia's liability does not extend to any damages arising from use or improper use of the Product, or losses associated with the use of additional materials or reagents. This limited warranty is the sole and exclusive warranty. GeneCopoeia does not provide any other warranties of any kind, expressed or implied, including the merchantability or fitness of the Product for a particular purpose.

GeneCopoeia is committed to providing our customers with high-quality products. If you should have any questions or concerns about any GeneCopoeia products, please contact us at 301-762-0888.

© 2016 GeneCopoeia, Inc.

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

GeneCopoeia Products are for Research Use Only

Trademarks: GeneCopoeia™, ExProfile™, All-in-One™, (GeneCopoeia Inc.); RNAzol® RT (Molecular Research Center, Inc.); SYBR® (Molecular Probes); iCycler iQ®, MyiQ™, iQ™5, CFX96™, DNA Engine Opticon™, DNA Engine Opticon 2™, Chromo4™ (Bio-Rad); LightCycler® (Roche); Trizol™, ABI®, ROX®, ViiA™, StepOnePlus™ (Life Technologies).

Copyright © 2016 GeneCopoeia, Inc.  
QG019-160202