

ExProfile™ Human Endothelial Cell Biology Related Gene qPCR Array

For focused group profiling of human endothelial cell biology genes expression

Cat. No. QG017-A (1 x 96-well plate, Format A)

Cat. No. QG017-B (1 x 96-well plate, Format B)

Cat. No. QG017-C (1 x 96-well plate, Format C)

Cat. No. QG017-D (1 x 96-well plate, Format D)

Cat. No. QG017-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 endothelial cell biology related gene qPCR array profiles the expression of 84 human genes related to endothelial cell. These genes are carefully chosen for their close correlation based on a thorough literature search of peer-reviewed publications, mainly including genes involved in permissibility and vessel tone, angiogenesis, endothelial cell activation and endothelial cell injury. This array allows researchers to study the related genes to gain understanding of their roles in the functioning and characterization of endothelial cell.

- QG017 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

GeneCopoela 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	FAS	COL18A1	CASP1	HPRT1	ACE	VWF	VEGFA	VCAM1	TNFSF10	TNFRSF10C	TNFAIP3
B	TNF	TIMP1	THBS1	THBD	TFPI	TEK	SPHK1	SOD1	SERPINE1	SELP1G	SELL	SELE
C	RIPK1	PTGIS	PLG	PLAU	PLAT	PLA2G4C	PECAM1	PDGFRA	OCLN	NOS3	NOS2A	MMP9
D	MMP1	KLK3	KIT	KDR	ITGB3	ITGB1	ITGAV	ITGA5	IL7	IL6	IL1B	IFNB1
E	ICAM1	FN1	FLT1	FGF1	FASLG	FAS	EDNRA	EDN1	ECGF1	CX3CL1	CSF2	CRADD
F	CFLAR	CDH5	CCL5	CCL2	CASP6	CASP3	CASP1	BLR1	BCL2L1	BCL2A1	BCL2	BAX
G	ANXA5	ALOX5	AGT	ADAM17	ACE	EDN2	AGTR1	ANGPT1	PF4	CPB2	PGF	RHOB
H	HGDC	HGDC	GAPDH	ACTB	B2M	RPL13A	HPRT1	RN18S1	RT	RT	PCR	PCR

Figure1. Illustration of QG017 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
QG017-01	A01	HQP006023	NM_054034	FN1
QG017-01	A02	HQP009653	NM_152872	FAS
QG017-01	A03	HQP019768	NM_130445	COL18A1
QG017-01	A04	HQP020210	NM_033294	CASP1
QG017-01	A05	HQP009026	NM_000194	HPRT1
QG017-01	A06	HQP004082	NM_152830	ACE
QG017-01	A07	HQP018504	NM_000552	VWF
QG017-01	A08	HQP018481	NM_003376	VEGFA
QG017-01	A09	HQP053975	NM_001078	VCAM1
QG017-01	A10	HQP021502	NM_003810	TNFSF10
QG017-01	A11	HQP021552	NM_003841	TNFRSF10C
QG017-01	A12	HQP018145	NM_006290	TNFAIP3
QG017-01	B01	HQP018141	NM_000594	TNF
QG017-01	B02	HQP018092	NM_003254	TIMP1
QG017-01	B03	HQP018068	NM_003246	THBS1
QG017-01	B04	HQP018067	NM_000361	THBD
QG017-01	B05	HQP018039	NM_006287	TFPI
QG017-01	B06	HQP018012	NM_000459	TEK
QG017-01	B07	HQP021658	NM_021972	SPHK1
QG017-01	B08	HQP017615	NM_000454	SOD1
QG017-01	B09	HQP012154	NM_000602	SERPINE1
QG017-01	B10	HQP016747	NM_003006	SELPLG
QG017-01	B11	HQP016745	NM_000655	SELL
QG017-01	B12	HQP016744	NM_000450	SELE
QG017-01	C01	HQP021492	NM_003804	RIPK1
QG017-01	C02	HQP015586	NM_000961	PTGIS
QG017-01	C03	HQP013257	NM_000301	PLG
QG017-01	C04	HQP013204	NM_002658	PLAU
QG017-01	C05	HQP013201	NM_000930	PLAT
QG017-01	C06	HQP021328	NM_003706	PLA2G4C
QG017-01	C07	HQP013015	NM_000442	PECAM1
QG017-01	C08	HQP012866	NM_006206	PDGFRA
QG017-01	C09	HQP012009	NM_002538	OCLN
QG017-01	C10	HQP011868	NM_000603	NOS3
QG017-01	C11	HQP011866	NM_000625	NOS2A
QG017-01	C12	HQP011263	NM_004994	MMP9
QG017-01	D01	HQP011255	NM_002421	MMP1
QG017-01	D02	HQP009637	NM_001648	KLK3
QG017-01	D03	HQP010099	NM_000222	KIT
QG017-01	D04	HQP010070	NM_002253	KDR
QG017-01	D05	HQP009818	NM_000212	ITGB3
QG017-01	D06	HQP009810	NM_002211	ITGB1

QG017-01	D07	HQP009808	NM_002210	ITGAV
QG017-01	D08	HQP009799	NM_002205	ITGA5
QG017-01	D09	HQP009676	NM_000880	IL7
QG017-01	D10	HQP009670	NM_000600	IL6
QG017-01	D11	HQP009641	NM_000576	IL1B
QG017-01	D12	HQP009463	NM_002176	IFNB1
QG017-01	E01	HQP009184	NM_000201	ICAM1
QG017-01	E02	HQP006022	NM_002026	FN1
QG017-01	E03	HQP005879	NM_002019	FLT1
QG017-01	E04	HQP005400	NM_000800	FGF1
QG017-01	E05	HQP009671	NM_000639	FASLG
QG017-01	E06	HQP009651	NM_000043	FAS
QG017-01	E07	HQP004562	NM_001957	EDNRA
QG017-01	E08	HQP004557	NM_001955	EDN1
QG017-01	E09	HQP004538	NM_001953	ECGF1
QG017-01	E10	HQP016652	NM_002996	CX3CL1
QG017-01	E11	HQP003159	NM_000758	CSF2
QG017-01	E12	HQP021493	NM_003805	CRADD
QG017-01	F01	HQP021604	NM_003879	CFLAR
QG017-01	F02	HQP000052	NM_001795	CDH5
QG017-01	F03	HQP016626	NM_002985	CCL5
QG017-01	F04	HQP016621	NM_002982	CCL2
QG017-01	F05	HQP020428	NM_032992	CASP6
QG017-01	F06	HQP020297	NM_004346	CASP3
QG017-01	F07	HQP020208	NM_033292	CASP1
QG017-01	F08	HQP016959	NM_001716	BLR1
QG017-01	F09	HQP016238	NM_138578	BCL2L1
QG017-01	F10	HQP016222	NM_004049	BCL2A1
QG017-01	F11	HQP016211	NM_000633	BCL2
QG017-01	F12	HQP015964	NM_004324	BAX
QG017-01	G01	HQP008829	NM_001154	ANXA5
QG017-01	G02	HQP006359	NM_000698	ALOX5
QG017-01	G03	HQP004494	NM_000029	AGT
QG017-01	G04	HQP017866	NM_003183	ADAM17
QG017-01	G05	HQP004081	NM_000789	ACE
QG017-01	G06	HQP004558	NM_001956	EDN2
QG017-01	G07	HQP054025	NM_031850	AGTR1
QG017-01	G08	HQP008097	NM_001146	ANGPT1
QG017-01	G09	HQP013057	NM_002619	PF4
QG017-01	G10	HQP002836	NM_001872	CPB2
QG017-01	G11	HQP013089	NM_002632	PGF
QG017-01	G12	HQP010327	NM_004040	RHOB
QG017-01	H01	HGDC		
QG017-01	H02	HGDC		
QG017-01	H03	HQP006940	NM_002046	GAPDH
QG017-01	H04	HQP016381	NM_001101	ACTB

QG017-01	H05	HQP015171	NM_004048	B2M
QG017-01	H06	HQP006171	NM_012423	RPL13A
QG017-01	H07	HQP009026	NM_000194	HPRT1
QG017-01	H08	HQP054253	NR_003286	RN18S1
QG017-01	H09	RT		
QG017-01	H10	RT		
QG017-01	H11	PCR		
QG017-01	H12	PCR		

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