

ExProfile™ Human Extracellular Matrix and Adhesion Molecules Related Gene qPCR Array

For focused group profiling of human extracellular matrix and adhesion molecules genes expression

Cat. No. QG013-A (1 x 96-well plate, Format A)

Cat. No. QG013-B (1 x 96-well plate, Format B)

Cat. No. QG013-C (1 x 96-well plate, Format C)

Cat. No. QG013-D (1 x 96-well plate, Format D)

Cat. No. QG013-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 extracellular matrix and adhesion molecules related gene qPCR array profiles the expression of 84 human genes related to cell-cell and cell-matrix interactions. 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 cell adhesion molecules, extracellular matrix proteins, and other related molecules. This array allows researchers to study the related genes to gain understanding of their roles in cell-cell and cell-matrix interactions.

- QG013 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

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	SPG7	LAMA3	FN1	CD44	HPRT1	VTN	VCAM1	TNC	CLEC3B	TIMP3	TIMP2	TIMP1
B	THBS3	THBS2	THBS1	TGFBI	SPP1	SPG7	SPARC	SGCE	SELP	SELL	SELE	PECAM1
C	MMP9	MMP8	MMP7	MMP3	MMP16	MMP15	MMP14	MMP13	MMP12	MMP11	MMP10	MMP1
D	LAMB1	LAMA3	LAMA2	LAMA1	KAL1	ITGB5	ITGB4	ITGB3	ITGB2	ITGB1	ITGAV	ITGAM
E	ITGAL	ITGA8	ITGA7	ITGA6	ITGA5	ITGA4	ITGA2	ITGA1	ICAM1	FN1	CTNND1	CTNND1
F	CTNNA1	CTGF	VCAN	COL8A1	COL6A2	COL6A1	COL5A1	COL4A2	COL1A1	COL16A1	COL15A1	COL14A1
G	COL12A1	COL11A1	CNTN1	CD44	ADAMTS8	ADAMTS1	COL7A1	COL12A1	CDH1	ECM1	HAS1	ITGA3
H	HGDC	HGDC	GAPDH	ACTB	B2M	RPL13A	HPRT1	RN18S1	RT	RT	PCR	PCR

Figure1. Illustration of QG013 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
QG013-01	A01	HQP017661	NM_199367	SPG7
QG013-01	A02	HQP010506	NM_198129	LAMA3
QG013-01	A03	HQP006023	NM_054034	FN1
QG013-01	A04	HQP022974	NM_001001390	CD44
QG013-01	A05	HQP009026	NM_000194	HPRT1
QG013-01	A06	HQP018502	NM_000638	VTN
QG013-01	A07	HQP053975	NM_001078	VCAM1
QG013-01	A08	HQP009140	NM_002160	TNC
QG013-01	A09	HQP018140	NM_003278	CLEC3B
QG013-01	A10	HQP018094	NM_000362	TIMP3
QG013-01	A11	HQP018093	NM_003255	TIMP2
QG013-01	A12	HQP018092	NM_003254	TIMP1
QG013-01	B01	HQP018070	NM_007112	THBS3
QG013-01	B02	HQP018069	NM_003247	THBS2
QG013-01	B03	HQP018068	NM_003246	THBS1
QG013-01	B04	HQP018050	NM_000358	TGFBI
QG013-01	B05	HQP017673	NM_000582	SPP1
QG013-01	B06	HQP017660	NM_003119	SPG7
QG013-01	B07	HQP017653	NM_003118	SPARC
QG013-01	B08	HQP021702	NM_003919	SGCE
QG013-01	B09	HQP016746	NM_003005	SELP
QG013-01	B10	HQP016745	NM_000655	SELL
QG013-01	B11	HQP016744	NM_000450	SELE
QG013-01	B12	HQP013015	NM_000442	PECAM1
QG013-01	C01	HQP011263	NM_004994	MMP9
QG013-01	C02	HQP011262	NM_002424	MMP8
QG013-01	C03	HQP011258	NM_002423	MMP7
QG013-01	C04	HQP011257	NM_002422	MMP3
QG013-01	C05	HQP011270	NM_005941	MMP16
QG013-01	C06	HQP011269	NM_002428	MMP15
QG013-01	C07	HQP011268	NM_004995	MMP14
QG013-01	C08	HQP011267	NM_002427	MMP13
QG013-01	C09	HQP011266	NM_002426	MMP12
QG013-01	C10	HQP011265	NM_005940	MMP11
QG013-01	C11	HQP011264	NM_002425	MMP10
QG013-01	C12	HQP011255	NM_002421	MMP1
QG013-01	D01	HQP010527	NM_002291	LAMB1

QG013-01	D02	HQP010505	NM_000227	LAMA3
QG013-01	D03	HQP010497	NM_000426	LAMA2
QG013-01	D04	HQP008000	NM_005559	LAMA1
QG013-01	D05	HQP009858	NM_000216	KAL1
QG013-01	D06	HQP009825	NM_002213	ITGB5
QG013-01	D07	HQP009819	NM_000213	ITGB4
QG013-01	D08	HQP009818	NM_000212	ITGB3
QG013-01	D09	HQP009815	NM_000211	ITGB2
QG013-01	D10	HQP009810	NM_002211	ITGB1
QG013-01	D11	HQP009808	NM_002210	ITGAV
QG013-01	D12	HQP009807	NM_000632	ITGAM
QG013-01	E01	HQP009806	NM_002209	ITGAL
QG013-01	E02	HQP021139	NM_003638	ITGA8
QG013-01	E03	HQP009800	NM_002206	ITGA7
QG013-01	E04	HQP009774	NM_000210	ITGA6
QG013-01	E05	HQP009799	NM_002205	ITGA5
QG013-01	E06	HQP009798	NM_000885	ITGA4
QG013-01	E07	HQP009794	NM_002203	ITGA2
QG013-01	E08	HQP009793	NM_181501	ITGA1
QG013-01	E09	HQP009184	NM_000201	ICAM1
QG013-01	E10	HQP006022	NM_002026	FN1
QG013-01	E11	HQP003544	NM_001331	CTNND1
QG013-01	E12	HQP003539	NM_001904	CTNNB1
QG013-01	F01	HQP003515	NM_001903	CTNNA1
QG013-01	F02	HQP003488	NM_001901	CTGF
QG013-01	F03	HQP003299	NM_004385	VCAN
QG013-01	F04	HQP002571	NM_001850	COL8A1
QG013-01	F05	HQP002551	NM_001849	COL6A2
QG013-01	F06	HQP002549	NM_001848	COL6A1
QG013-01	F07	HQP002541	NM_000093	COL5A1
QG013-01	F08	HQP002506	NM_001846	COL4A2
QG013-01	F09	HQP002462	NM_000088	COL1A1
QG013-01	F10	HQP002648	NM_001856	COL16A1
QG013-01	F11	HQP002644	NM_001855	COL15A1
QG013-01	F12	HQP018426	NM_021110	COL14A1
QG013-01	G01	HQP002612	NM_004370	COL12A1
QG013-01	G02	HQP002602	NM_080629	COL11A1
QG013-01	G03	HQP002435	NM_001843	CNTN1
QG013-01	G04	HQP022972	NM_000610	CD44
QG013-01	G05	HQP001257	NM_007037	ADAMTS8
QG013-01	G06	HQP022847	NM_006988	ADAMTS1

QG013-01	G07	HQP002566	NM_000094	COL7A1
QG013-01	G08	HQP002613	NM_080645	COL12A1
QG013-01	G09	HQP023466	NM_004360	CDH1
QG013-01	G10	HQP004541	NM_004425	ECM1
QG013-01	G11	HQP008723	NM_001523	HAS1
QG013-01	G12	HQP009796	NM_002204	ITGA3
QG013-01	H01	HGDC		
QG013-01	H02	HGDC		
QG013-01	H03	HQP006940	NM_002046	GAPDH
QG013-01	H04	HQP016381	NM_001101	ACTB
QG013-01	H05	HQP015171	NM_004048	B2M
QG013-01	H06	HQP006171	NM_012423	RPL13A
QG013-01	H07	HQP009026	NM_000194	HPRT1
QG013-01	H08	HQP054253	NR_003286	RN18S1
QG013-01	H09	RT		
QG013-01	H10	RT		
QG013-01	H11	PCR		
QG013-01	H12	PCR		

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