

## ExProfile™ Human Chemokines & Receptors Related Gene qPCR Array

For focused group profiling of human chemokines and receptors genes expression

Cat. No. QG086-A (1 x 96-well plate, Format A)

Cat. No. QG086-B (1 x 96-well plate, Format B)

Cat. No. QG086-C (1 x 96-well plate, Format C)

Cat. No. QG086-D (1 x 96-well plate, Format D)

Cat. No. QG086-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 chemokines and receptors related gene qPCR array profiles the expression of 84 human genes related to chemotaxis. These genes are carefully chosen for their close pathway correlation based on a thorough literature search of peer-reviewed publications, mainly including genes that encode various chemokines and their receptors, as well as other related genes. This array allows researchers to study the related genes to gain understanding of their roles in the functioning and characterization of chemotaxis.

- QG086 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
<b>A</b> (96-well)	Applied Biosystems	5700, 7000, 7300, 7500, 7700, 7900HT (Standard 96-well block), ViiA™7 (Standard 96-well block)
<b>B</b> (96-well)	Applied Biosystems	7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA™7 (Fast block)
<b>C</b> (96-well)	Bio-Rad Laboratories	iCycler iQ®, MyiQ™, iQ™5
<b>D</b> (96-well)	Bio-Rad Laboratories	CFX96™, DNA Engine Opticon™, DNA Engine Opticon 2™, Chromo4™
<b>E</b> (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	HIF1A	HPRT1	VHL	TNFSF14	TNFRSF1A	TNF	TLR4	TLR2	SLIT2	SDF2	SCYE1	NFKB1
B	MYD88	MMP7	IL8RA	IL8	IL4	IL1A	IL18	IL13	HIF1A	GPR81	GPR31	GDF5
C	ECGF1	CYFIP2	CXCR6	CXCR4	CXCR3	CXCL9	CXCL6	CXCL5	CXCL3	CXCL2	CXCL13	CXCL12
D	CXCL11	CXCL10	CXCL1	CX3CR1	CX3CL1	CSF3	CMKLR1	CMTM4	CMTM3	CMTM2	CMTM1	CKLF
E	CCRL2	CCRL1	CCR8	CCR7	CCR6	CCR5	CCR4	CCR2	CCR10	CCR1	CCL8	CCL7
F	CCL5	CCL4	CCL3	CCL2	CCL19	CCL18	CCL17	CCL16	CCL15	CCL13	CCL11	CCL1
G	CCBP2	C5AR1	C5	BLR1	AGTRL1	CCR3	CMTM1	BDNF	IL16	MMP2	TCP10	TREM1
H	HGDC	HGDC	GAPDH	ACTB	B2M	RPL13A	HPRT1	RN18S1	RT	RT	PCR	PCR

Figure1. Illustration of QG086 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
QG086-01	A01	HQP008832	NM_181054	HIF1A
QG086-01	A02	HQP009026	NM_000194	HPRT1
QG086-01	A03	HQP018485	NM_000551	VHL
QG086-01	A04	HQP021496	NM_003807	TNFSF14
QG086-01	A05	HQP018148	NM_001065	TNFRSF1A
QG086-01	A06	HQP018141	NM_000594	TNF
QG086-01	A07	HQP018116	NM_138554	TLR4
QG086-01	A08	HQP018114	NM_003264	TLR2
QG086-01	A09	HQP022584	NM_004787	SLIT2
QG086-01	A10	HQP016672	NM_006923	SDF2
QG086-01	A11	HQP022410	NM_004757	SCYE1
QG086-01	A12	HQP011807	NM_003998	NFKB1
QG086-01	B01	HQP011603	NM_002468	MYD88
QG086-01	B02	HQP011258	NM_002423	MMP7
QG086-01	B03	HQP009679	NM_000634	IL8RA
QG086-01	B04	HQP009678	NM_000584	IL8
QG086-01	B05	HQP009662	NM_000589	IL4
QG086-01	B06	HQP009640	NM_000575	IL1A
QG086-01	B07	HQP009718	NM_001562	IL18
QG086-01	B08	HQP009697	NM_002188	IL13
QG086-01	B09	HQP008831	NM_001530	HIF1A
QG086-01	B10	HQP007585	NM_032554	GPR81
QG086-01	B11	HQP008143	NM_005299	GPR31
QG086-01	B12	HQP020039	NM_000557	GDF5

QG086-01	C01	HQP004538	NM_001953	ECGF1
QG086-01	C02	HQP054015	NM_014376	CYFIP2
QG086-01	C03	HQP000808	NM_006564	CXCR6
QG086-01	C04	HQP018803	NM_003467	CXCR4
QG086-01	C05	HQP007900	NM_001504	CXCR3
QG086-01	C06	HQP011220	NM_002416	CXCL9
QG086-01	C07	HQP016648	NM_002993	CXCL6
QG086-01	C08	HQP016650	NM_002994	CXCL5
QG086-01	C09	HQP008459	NM_002090	CXCL3
QG086-01	C10	HQP008458	NM_002089	CXCL2
QG086-01	C11	HQP000672	NM_006419	CXCL13
QG086-01	C12	HQP016669	NM_000609	CXCL12
QG086-01	D01	HQP016649	NM_005409	CXCL11
QG086-01	D02	HQP009746	NM_001565	CXCL10
QG086-01	D03	HQP008456	NM_001511	CXCL1
QG086-01	D04	HQP003691	NM_001337	CX3CR1
QG086-01	D05	HQP016652	NM_002996	CX3CL1
QG086-01	D06	HQP003173	NM_000759	CSF3
QG086-01	D07	HQP002242	NM_004072	CMKLR1
QG086-01	D08	HQP003295	NM_178818	CMTM4
QG086-01	D09	HQP054031	NM_144601	CMTM3
QG086-01	D10	HQP003297	NM_144673	CMTM2
QG086-01	D11	HQP001619	NM_181269	CMTM1
QG086-01	D12	HQP012497	NM_181641	CKLF
QG086-01	E01	HQP021922	NM_003965	CCRL2
QG086-01	E02	HQP012851	NM_016557	CCRL1

QG086-01	E03	HQP002222	NM_005201	CCR8
QG086-01	E04	HQP002217	NM_001838	CCR7
QG086-01	E05	HQP002212	NM_004367	CCR6
QG086-01	E06	HQP002210	NM_000579	CCR5
QG086-01	E07	HQP002209	NM_005508	CCR4
QG086-01	E08	HQP002201	NM_000648	CCR2
QG086-01	E09	HQP007833	NM_016602	CCR10
QG086-01	E10	HQP002198	NM_001295	CCR1
QG086-01	E11	HQP016628	NM_005623	CCL8
QG086-01	E12	HQP016627	NM_006273	CCL7
QG086-01	F01	HQP016626	NM_002985	CCL5
QG086-01	F02	HQP016625	NM_002984	CCL4
QG086-01	F03	HQP016622	NM_002983	CCL3
QG086-01	F04	HQP016621	NM_002982	CCL2
QG086-01	F05	HQP016638	NM_006274	CCL19
QG086-01	F06	HQP016637	NM_002988	CCL18
QG086-01	F07	HQP016636	NM_002987	CCL17
QG086-01	F08	HQP016635	NM_004590	CCL16
QG086-01	F09	HQP054027	NM_032965	CCL15
QG086-01	F10	HQP016630	NM_005408	CCL13
QG086-01	F11	HQP016629	NM_002986	CCL11
QG086-01	F12	HQP016620	NM_002981	CCL1
QG086-01	G01	HQP002229	NM_001296	CCBP2
QG086-01	G02	HQP018326	NM_001736	C5AR1
QG086-01	G03	HQP018304	NM_001735	C5
QG086-01	G04	HQP016959	NM_001716	BLR1

QG086-01	G05	HQP004535	NM_005161	AGTRL1
QG086-01	G06	HQP002207	NM_001837	CCR3
QG086-01	G07	HQP001625	NM_181296	CMTM1
QG086-01	G08	HQP016545	NM_001709	BDNF
QG086-01	G09	HQP009714	NM_004513	IL16
QG086-01	G10	HQP054072	NM_004530	MMP2
QG086-01	G11	HQP017986	NM_004610	TCP10
QG086-01	G12	HQP013418	NM_018643	TREM1
QG086-01	H01	HGDC		
QG086-01	H02	HGDC		
QG086-01	H03	HQP006940	NM_002046	GAPDH
QG086-01	H04	HQP016381	NM_001101	ACTB
QG086-01	H05	HQP015171	NM_004048	B2M
QG086-01	H06	HQP006171	NM_012423	RPL13A
QG086-01	H07	HQP009026	NM_000194	HPRT1
QG086-01	H08	HQP054253	NR_003286	RN18S1
QG086-01	H09	RT		
QG086-01	H10	RT		
QG086-01	H11	PCR		
QG086-01	H12	PCR		

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