

ExProfile™ Human Inflammatory Cytokines & Receptors Related Gene qPCR Array

For focused group profiling of human inflammatory cytokines & receptors related gene expression

Cat. No. QG028-A (1 x 96-well plate, Format A)

Cat. No. QG028-B (1 x 96-well plate, Format B)

Cat. No. QG028-C (1 x 96-well plate, Format C)

Cat. No. QG028-D (1 x 96-well plate, Format D)

Cat. No. QG028-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 inflammatory cytokines & receptors related qPCR array profiles the expression of 84 human genes related to the inflammatory response. These genes were carefully chosen for their close pathway correlation based on a thorough literature search of peer-reviewed publications, and include: 1) genes involved in mediating immune cascade reactions during inflammation; and 2) genes that encode chemokines, cytokines, and interleukins involved in the inflammatory response and their receptors. This array allows researchers to study pathway-related genes to gain understanding of their roles in the inflammatory response.

- QG028 plate 01: 84 unique gene PCR primer pairs

Shipping and storage conditions

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 receipt, please check to make sure that the correct array format was ordered to ensure 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	ABCF1	BCL6	C3	C4A	C5	CCL1	CCL11	CCL13	CCL15	CCL16	CCL17	CCL18
B	CCL19	CCL2	CCL20	CCL21	CCL23	CCL24	CCL25	CCL26	CCL3	CCL4	CCL5	CCL7
C	CCL8	CCR1	CCR2	CCR4	CCR5	CCR6	CCR7	CCR8	CCR9	CRP	CX3CR1	CXCL1
D	CXCL10	CXCL11	CXCL12	CXCL13	CXCL14	CXCL2	CXCL3	CXCL5	CXCL6	CXCL9	IFNA2	IL10
E	IL10RA	IL10RB	IL13	IL13RA1	IL17C	IL1A	IL1B	IL1F5	IL1F6	IL1F8	IL1F9	IL1R1
F	IL1RN	IL22	IL5	IL5RA	IL8	IL8RA	IL8RB	IL9R	LTA	MIF	SCYE1	SPP1
G	TNF	CD40LG	TOLLIP	HPRT1	ABCF1	CCL23	CXCL12	CCR3	CEBPB	IL9	LTB	LTB4R
H	HGDC	HGDC	GAPDH	ACTB	B2M	RPL13A	HPRT1	RN18S1	RT	RT	PCR	PCR

Figure1. Illustration of QG028 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 reverse 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
QG028-01	A01	HQP006358	NM_001090	ABCF1
QG028-01	A02	HQP016328	NM_001706	BCL6
QG028-01	A03	HQP018238	NM_000064	C3
QG028-01	A04	HQP018248	NM_007293	C4A
QG028-01	A05	HQP018304	NM_001735	C5
QG028-01	A06	HQP016620	NM_002981	CCL1
QG028-01	A07	HQP016629	NM_002986	CCL11
QG028-01	A08	HQP016630	NM_005408	CCL13
QG028-01	A09	HQP054027	NM_032965	CCL15
QG028-01	A10	HQP016635	NM_004590	CCL16
QG028-01	A11	HQP016636	NM_002987	CCL17
QG028-01	A12	HQP016637	NM_002988	CCL18
QG028-01	B01	HQP016638	NM_006274	CCL19
QG028-01	B02	HQP016621	NM_002982	CCL2
QG028-01	B03	HQP016639	NM_004591	CCL20
QG028-01	B04	HQP016640	NM_002989	CCL21
QG028-01	B05	HQP016642	NM_005064	CCL23
QG028-01	B06	HQP016644	NM_002991	CCL24
QG028-01	B07	HQP016647	NM_005624	CCL25
QG028-01	B08	HQP000421	NM_006072	CCL26
QG028-01	B09	HQP016622	NM_002983	CCL3
QG028-01	B10	HQP016625	NM_002984	CCL4
QG028-01	B11	HQP016626	NM_002985	CCL5
QG028-01	B12	HQP016627	NM_006273	CCL7
QG028-01	C01	HQP016628	NM_005623	CCL8
QG028-01	C02	HQP002198	NM_001295	CCR1
QG028-01	C03	HQP002201	NM_000648	CCR2
QG028-01	C04	HQP002209	NM_005508	CCR4
QG028-01	C05	HQP002210	NM_000579	CCR5
QG028-01	C06	HQP002212	NM_004367	CCR6
QG028-01	C07	HQP002217	NM_001838	CCR7
QG028-01	C08	HQP002222	NM_005201	CCR8
QG028-01	C09	HQP000939	NM_006641	CCR9
QG028-01	C10	HQP002994	NM_000567	CRP
QG028-01	C11	HQP003691	NM_001337	CX3CR1
QG028-01	C12	HQP008456	NM_001511	CXCL1
QG028-01	D01	HQP009746	NM_001565	CXCL10
QG028-01	D02	HQP016649	NM_005409	CXCL11
QG028-01	D03	HQP016669	NM_000609	CXCL12
QG028-01	D04	HQP000672	NM_006419	CXCL13
QG028-01	D05	HQP022893	NM_004887	CXCL14

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QG028-01	D06	HQP008458	NM_002089	CXCL2
QG028-01	D07	HQP008459	NM_002090	CXCL3
QG028-01	D08	HQP016650	NM_002994	CXCL5
QG028-01	D09	HQP016648	NM_002993	CXCL6
QG028-01	D10	HQP011220	NM_002416	CXCL9
QG028-01	D11	HQP009422	NM_000605	IFNA2
QG028-01	D12	HQP009685	NM_000572	IL10
QG028-01	E01	HQP009686	NM_001558	IL10RA
QG028-01	E02	HQP009687	NM_000628	IL10RB
QG028-01	E03	HQP009697	NM_002188	IL13
QG028-01	E04	HQP009700	NM_001560	IL13RA1
QG028-01	E05	HQP007582	NM_013278	IL17C
QG028-01	E06	HQP009640	NM_000575	IL1A
QG028-01	E07	HQP009641	NM_000576	IL1B
QG028-01	E08	HQP007289	NM_012275	IL1F5
QG028-01	E09	HQP007573	NM_014440	IL1F6
QG028-01	E10	HQP007567	NM_173178	IL1F8
QG028-01	E11	HQP015063	NM_019618	IL1F9
QG028-01	E12	HQP009642	NM_000877	IL1R1
QG028-01	F01	HQP009645	NM_000577	IL1RN
QG028-01	F02	HQP012161	NM_020525	IL22
QG028-01	F03	HQP009666	NM_000879	IL5
QG028-01	F04	HQP009667	NM_000564	IL5RA
QG028-01	F05	HQP009678	NM_000584	IL8
QG028-01	F06	HQP009679	NM_000634	IL8RA
QG028-01	F07	HQP009681	NM_001557	IL8RB
QG028-01	F08	HQP009683	NM_002186	IL9R
QG028-01	F09	HQP010907	NM_000595	LTA
QG028-01	F10	HQP011219	NM_002415	MIF
QG028-01	F11	HQP022410	NM_004757	SCYE1
QG028-01	F12	HQP017673	NM_000582	SPP1
QG028-01	G01	HQP018141	NM_000594	TNF
QG028-01	G02	HQP022962	NM_000074	CD40LG
QG028-01	G03	HQP013496	NM_019009	TOLLIP
QG028-01	G04	HQP009026	NM_000194	HPRT1
QG028-01	G05	HQP006357	NM_001025091	ABCF1
QG028-01	G06	HQP016643	NM_145898	CCL23
QG028-01	G07	HQP016670	NM_001033886	CXCL12
QG028-01	G08	HQP002207	NM_001837	CCR3
QG028-01	G09	HQP000623	NM_005194	CEBPB
QG028-01	G10	HQP009680	NM_000590	IL9
QG028-01	G11	HQP010908	NM_002341	LTB
QG028-01	G12	HQP002245	NM_181657	LTB4R
QG028-01	H01	HGDC		
QG028-01	H02	HGDC		
QG028-01	H03	HQP006940	NM_002046	GAPDH
QG028-01	H04	HQP016381	NM_001101	ACTB

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QG028-01	H05	HQP015171	NM_004048	B2M
QG028-01	H06	HQP006171	NM_012423	RPL13A
QG028-01	H07	HQP009026	NM_000194	HPRT1
QG028-01	H08	HQP054253	NR_003286	RN18S1
QG028-01	H09	RT		
QG028-01	H10	RT		
QG028-01	H11	PCR		
QG028-01	H12	PCR		

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