

ExProfile™ Human Inflammatory Response and Autoimmunity Related Gene qPCR Array

For focused group profiling of human inflammatory response and autoimmunity related gene expression

Cat. No. QG048-A (1 x 96-well plate, Format A)

Cat. No. QG048-B (1 x 96-well plate, Format B)

Cat. No. QG048-C (1 x 96-well plate, Format C)

Cat. No. QG048-D (1 x 96-well plate, Format D)

Cat. No. QG048-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 response and autoimmunity related gene qPCR array profiles the expression of 84 human genes related to autoimmune and inflammatory immune responses. These genes are carefully chosen for their close pathway correlation based on a thorough literature search of peer-reviewed publications, and include genes that encode inflammatory cytokines, chemokines and their receptors, and genes related to metabolism of cytokines and that are involved in cytokine-cytokine receptor interactions. This array allows researchers to study pathway-related genes to gain understanding of their roles in inflammatory and autoimmune responses.

- QG048 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

GeneCopeia 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	BCL6	C3	C3AR1	C4A	CCL11	CCL13	CCL16	CCL17	CCL19	CCL2	CCL21	CCL22
B	CCL23	CCL24	CCL3	CCL4	CCL5	CCL7	CCL8	CCR1	CCR2	CCR4	CCR7	CD40
C	CD40LG	CRP	CSF1	CXCL1	CXCL10	CXCL2	CXCL3	CXCL5	CXCL6	CXCL9	CXCR4	FASLG
D	FOS	HDAC4	IFNG	IL10	IL10RB	IL18	IL18RAP	IL1A	IL1B	IL1R1	IL1RAP	IL1RN
E	IL22	IL22RA2	IL23A	IL23R	IL6	IL6R	IL8	IL8RA	IL8RB	ITGB2	KNG1	LTA
F	LY96	MYD88	NFATC3	NFKB1	NOS2A	NR3C1	RIPK2	TIRAP	TLR1	TLR2	TLR3	TLR4
G	TLR5	TLR6	TLR7	TNF	TNFSF14	TOLLIP	CSF1	HPRT1	IL1RAP	IL6R	CCL23	CCR3
H	HGDC	HGDC	GAPDH	ACTB	B2M	RPL13A	HPRT1	RN18S1	RT	RT	PCR	PCR

Figure1. Illustration of QG048 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
QG048-01	A01	HQP016328	NM_001706	BCL6
QG048-01	A02	HQP018238	NM_000064	C3
QG048-01	A03	HQP018239	NM_004054	C3AR1
QG048-01	A04	HQP018248	NM_007293	C4A
QG048-01	A05	HQP016629	NM_002986	CCL11
QG048-01	A06	HQP016630	NM_005408	CCL13
QG048-01	A07	HQP016635	NM_004590	CCL16
QG048-01	A08	HQP016636	NM_002987	CCL17
QG048-01	A09	HQP016638	NM_006274	CCL19
QG048-01	A10	HQP016621	NM_002982	CCL2
QG048-01	A11	HQP016640	NM_002989	CCL21
QG048-01	A12	HQP016641	NM_002990	CCL22
QG048-01	B01	HQP016642	NM_005064	CCL23
QG048-01	B02	HQP016644	NM_002991	CCL24
QG048-01	B03	HQP016622	NM_002983	CCL3
QG048-01	B04	HQP016625	NM_002984	CCL4
QG048-01	B05	HQP016626	NM_002985	CCL5
QG048-01	B06	HQP016627	NM_006273	CCL7
QG048-01	B07	HQP016628	NM_005623	CCL8
QG048-01	B08	HQP002198	NM_001295	CCR1
QG048-01	B09	HQP002201	NM_000648	CCR2
QG048-01	B10	HQP002209	NM_005508	CCR4
QG048-01	B11	HQP002217	NM_001838	CCR7
QG048-01	B12	HQP022955	NM_001250	CD40
QG048-01	C01	HQP022962	NM_000074	CD40LG
QG048-01	C02	HQP002994	NM_000567	CRP
QG048-01	C03	HQP003149	NM_000757	CSF1
QG048-01	C04	HQP008456	NM_001511	CXCL1
QG048-01	C05	HQP009746	NM_001565	CXCL10
QG048-01	C06	HQP008458	NM_002089	CXCL2
QG048-01	C07	HQP008459	NM_002090	CXCL3
QG048-01	C08	HQP016650	NM_002994	CXCL5
QG048-01	C09	HQP016648	NM_002993	CXCL6
QG048-01	C10	HQP011220	NM_002416	CXCL9
QG048-01	C11	HQP018803	NM_003467	CXCR4
QG048-01	C12	HQP009671	NM_000639	FASLG
QG048-01	D01	HQP006188	NM_005252	FOS
QG048-01	D02	HQP023167	NM_006037	HDAC4
QG048-01	D03	HQP009467	NM_000619	IFNG
QG048-01	D04	HQP009685	NM_000572	IL10
QG048-01	D05	HQP009687	NM_000628	IL10RB

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QG048-01	D06	HQP009718	NM_001562	IL18
QG048-01	D07	HQP021568	NM_003853	IL18RAP
QG048-01	D08	HQP009640	NM_000575	IL1A
QG048-01	D09	HQP009641	NM_000576	IL1B
QG048-01	D10	HQP009642	NM_000877	IL1R1
QG048-01	D11	HQP009643	NM_002182	IL1RAP
QG048-01	D12	HQP009645	NM_000577	IL1RN
QG048-01	E01	HQP012161	NM_020525	IL22
QG048-01	E02	HQP001881	NM_052962	IL22RA2
QG048-01	E03	HQP012859	NM_016584	IL23A
QG048-01	E04	HQP003495	NM_144701	IL23R
QG048-01	E05	HQP009670	NM_000600	IL6
QG048-01	E06	HQP009672	NM_000565	IL6R
QG048-01	E07	HQP009678	NM_000584	IL8
QG048-01	E08	HQP009679	NM_000634	IL8RA
QG048-01	E09	HQP009681	NM_001557	IL8RB
QG048-01	E10	HQP009815	NM_000211	ITGB2
QG048-01	E11	HQP010114	NM_000893	KNG1
QG048-01	E12	HQP010907	NM_000595	LTA
QG048-01	F01	HQP006296	NM_015364	LY96
QG048-01	F02	HQP011603	NM_002468	MYD88
QG048-01	F03	HQP011792	NM_004555	NFATC3
QG048-01	F04	HQP011807	NM_003998	NFKB1
QG048-01	F05	HQP011866	NM_000625	NOS2A
QG048-01	F06	HQP008401	NM_000176	NR3C1
QG048-01	F07	HQP021524	NM_003821	RIPK2
QG048-01	F08	HQP001674	NM_001039661	TIRAP
QG048-01	F09	HQP018113	NM_003263	TLR1
QG048-01	F10	HQP018114	NM_003264	TLR2
QG048-01	F11	HQP018115	NM_003265	TLR3
QG048-01	F12	HQP018116	NM_138554	TLR4
QG048-01	G01	HQP018118	NM_003268	TLR5
QG048-01	G02	HQP000415	NM_006068	TLR6
QG048-01	G03	HQP012591	NM_016562	TLR7
QG048-01	G04	HQP018141	NM_000594	TNF
QG048-01	G05	HQP021496	NM_003807	TNFSF14
QG048-01	G06	HQP013496	NM_019009	TOLLIP
QG048-01	G07	HQP003150	NM_172210	CSF1
QG048-01	G08	HQP009026	NM_000194	HPRT1
QG048-01	G09	HQP009644	NM_134470	IL1RAP
QG048-01	G10	HQP009673	NM_181359	IL6R
QG048-01	G11	HQP016643	NM_145898	CCL23
QG048-01	G12	HQP002207	NM_001837	CCR3
QG048-01	H01	HGDC		
QG048-01	H02	HGDC		
QG048-01	H03	HQP006940	NM_002046	GAPDH
QG048-01	H04	HQP016381	NM_001101	ACTB

Product Data Sheet

QG048-01	H05	HQP015171	NM_004048	B2M
QG048-01	H06	HQP006171	NM_012423	RPL13A
QG048-01	H07	HQP009026	NM_000194	HPRT1
QG048-01	H08	HQP054253	NR_003286	RN18S1
QG048-01	H09	RT		
QG048-01	H10	RT		
QG048-01	H11	PCR		
QG048-01	H12	PCR		

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