

ExProfile™ Human Myeloma Gene qPCR Array

For focused group profiling of human myeloma related genes expression

Cat. No. QG074-A (1 x 96-well plate, Format A)

Cat. No. QG074-B (1 x 96-well plate, Format B)

Cat. No. QG074-C (1 x 96-well plate, Format C)

Cat. No. QG074-D (1 x 96-well plate, Format D)

Cat. No. QG074-E (1 x 96-well plate, Format E)

Available as 1 set or 6 sets. Each set contains 84 unique gene primers deposited in one 96-well plate.

Introduction

The ExProfile human myeloma gene qPCR array profiles 84 human genes to aberrantly expressed human genes involved in human myeloma. These genes are carefully chosen for their close cancer correlation based on a thorough literature search of peer-reviewed publications. Abnormal gene expression is often observed in cancer development and progression. The ExProfile human myeloma gene array allows researchers to study the cancer-related genes to gain understanding of their roles in myeloma pathogenesis.

- QG074 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	IL6	TNF	MTHFR	ABCB1	IL1B	TYMS	NFKBIA	NFKB1	IL10	IL6R	CYP2C19	XRCC3
B	TP53	PON1	MTRR	MTR	IRF4	IL6ST	IL4R	IL4	IL1RN	IL1A	IGF1R	FCGR2A
C	EPHX1	CYP1A1	CTLA4	PPP1R13L	NQO1	HLA-DRB1	NAT1	CD81	CD79B	CD40	CD28	CD5
D	CD4	TNFSF18	CFLAR	TNFRSF10A	TNFRSF10B	FADD	TNFRSF14	TNFSF10	TRADD	CASP3	TLR10	COL18A1
E	CASP8	XRCC5	XRCC4	VEGFA	VCAM1	TRAF6	TRAF5	TRAF2	TNFRSF1B	TLR1	RPS19	RELB
F	RELA	REL	PTGS2	PSMA6	PPARG	TNFRSF12A	P2RX7	NFKBIE	NFKB2	ABCC1	MPO	LIG4
G	JAK3	IRS1	IL18	TNFRSF9	IL15	IL13	IL12RB2	IL12RB1	IL12B	IL12A	IL10RB	IL8RB
H	HGDC	HGDC	GAPDH	ACTB	B2M	RPL13A	HPRT1	RN18S1	RT	RT	PCR	PCR

Figure1. Illustration of QG074 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
QG074-01	A01	HQP009670	NM_000600	IL6
QG074-01	A02	HQP018141	NM_000594	TNF
QG074-01	A03	HQP011547	NM_005957	MTHFR
QG074-01	A04	HQP013100	NM_000927	ABCB1
QG074-01	A05	HQP009641	NM_000576	IL1B
QG074-01	A06	HQP018342	NM_001071	TYMS
QG074-01	A07	HQP011810	NM_020529	NFKBIA
QG074-01	A08	HQP011807	NM_003998	NFKB1
QG074-01	A09	HQP009685	NM_000572	IL10
QG074-01	A10	HQP009672	NM_000565	IL6R
QG074-01	A11	HQP003809	NM_000769	CYP2C19
QG074-01	A12	HQP018564	NM_005432	XRCC3
QG074-01	B01	HQP018175	NM_000546	TP53
QG074-01	B02	HQP013473	NM_000446	PON1
QG074-01	B03	HQP011555	NM_002454	MTRR
QG074-01	B04	HQP011554	NM_000254	MTR
QG074-01	B05	HQP009781	NM_002460	IRF4
QG074-01	B06	HQP009675	NM_175767	IL6ST
QG074-01	B07	HQP009664	NM_000418	IL4R
QG074-01	B08	HQP009662	NM_000589	IL4
QG074-01	B09	HQP009645	NM_000577	IL1RN
QG074-01	B10	HQP009640	NM_000575	IL1A
QG074-01	B11	HQP009523	NM_000875	IGF1R
QG074-01	B12	HQP005280	NM_021642	FCGR2A
QG074-01	C01	HQP004948	NM_000120	EPHX1
QG074-01	C02	HQP003772	NM_000499	CYP1A1
QG074-01	C03	HQP003499	NM_001037631	CTLA4
QG074-01	C04	HQP000970	NM_006663	PPP1R13L
QG074-01	C05	HQP004317	NM_000903	NQO1
QG074-01	C06	HQP054047	BC008403	HLA-DRB1
QG074-01	C07	HQP023467	NM_000662	NAT1
QG074-01	C08	HQP023168	NM_004356	CD81
QG074-01	C09	HQP023155	NM_000626	CD79B
QG074-01	C10	HQP022955	NM_001250	CD40
QG074-01	C11	HQP022699	NM_006139	CD28
QG074-01	C12	HQP022337	NM_014207	CD5
QG074-01	D01	HQP022316	NM_000616	CD4
QG074-01	D02	HQP021834	NM_005092	TNFSF18
QG074-01	D03	HQP021604	NM_003879	CFLAR
QG074-01	D04	HQP021557	NM_003844	TNFRSF10A
QG074-01	D05	HQP021553	NM_003842	TNFRSF10B
QG074-01	D06	HQP021526	NM_003824	FADD
QG074-01	D07	HQP021522	NM_003820	TNFRSF14

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QG074-01	D08	HQP021502	NM_003810	TNFSF10
QG074-01	D09	HQP021462	NM_003789	TRADD
QG074-01	D10	HQP020297	NM_004346	CASP3
QG074-01	D11	HQP019982	NM_001017388	TLR10
QG074-01	D12	HQP019768	NM_130445	COL18A1
QG074-01	E01	HQP018966	NM_001080124	CASP8
QG074-01	E02	HQP018568	NM_021141	XRCC5
QG074-01	E03	HQP018565	NM_003401	XRCC4
QG074-01	E04	HQP018475	NM_001025366	VEGFA
QG074-01	E05	HQP018466	NM_080682	VCAM1
QG074-01	E06	HQP018237	NM_004620	TRAF6
QG074-01	E07	HQP018236	NM_001033910	TRAF5
QG074-01	E08	HQP018233	NM_021138	TRAF2
QG074-01	E09	HQP018149	NM_001066	TNFRSF1B
QG074-01	E10	HQP018113	NM_003263	TLR1
QG074-01	E11	HQP016487	NM_001022	RPS19
QG074-01	E12	HQP016214	NM_006509	RELB
QG074-01	F01	HQP016213	NM_021975	RELA
QG074-01	F02	HQP016208	NM_002908	REL
QG074-01	F03	HQP015598	NM_000963	PTGS2
QG074-01	F04	HQP015194	NM_002791	PSMA6
QG074-01	F05	HQP013633	NM_005037	PPARG
QG074-01	F06	HQP012651	NM_016639	TNFRSF12A
QG074-01	F07	HQP012100	NM_002562	P2RX7
QG074-01	F08	HQP011813	NM_004556	NFKBIE
QG074-01	F09	HQP011808	NM_001077493	NFKB2
QG074-01	F10	HQP011325	NM_019899	ABCC1
QG074-01	F11	HQP011309	NM_000250	MPO
QG074-01	F12	HQP010613	NM_002312	LIG4
QG074-01	G01	HQP009851	NM_000215	JAK3
QG074-01	G02	HQP009788	NM_005544	IRS1
QG074-01	G03	HQP009718	NM_001562	IL18
QG074-01	G04	HQP009716	NM_001561	TNFRSF9
QG074-01	G05	HQP009708	NM_000585	IL15
QG074-01	G06	HQP009697	NM_002188	IL13
QG074-01	G07	HQP009696	NM_001559	IL12RB2
QG074-01	G08	HQP009694	NM_005535	IL12RB1
QG074-01	G09	HQP009693	NM_002187	IL12B
QG074-01	G10	HQP009692	NM_000882	IL12A
QG074-01	G11	HQP009687	NM_000628	IL10RB
QG074-01	G12	HQP009681	NM_001557	IL8RB
QG074-01	H01	HGDC		
QG074-01	H02	HGDC		
QG074-01	H03	HQP006940	NM_002046	GAPDH
QG074-01	H04	HQP016381	NM_001101	ACTB
QG074-01	H05	HQP015171	NM_004048	B2M
QG074-01	H06	HQP006171	NM_012423	RPL13A

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QG074-01	H07	HQP009026	NM_000194	HPRT1
QG074-01	H08	HQP054253	NR_003286	RN18S1
QG074-01	H09	RT		
QG074-01	H10	RT		
QG074-01	H11	PCR		
QG074-01	H12	PCR		

Limited Use License

Following terms and conditions apply to use of ExProfile™ Myeloma Gene qPCR Array (the Product). If the terms and conditions are not acceptable, the Product in its entirety must be returned to GeneCopoeia within 5 calendar days. A limited End-User license is granted to the purchaser of the Product. The Product shall be used by the purchaser for internal research purposes only. The Product is expressly not designed, intended, or warranted for use in humans or for therapeutic or diagnostic use. The Product must not be resold, repackaged or modified for resale, or used to manufacture commercial products or deliver information obtained in service without prior written consent from GeneCopoeia. This Product should be used in accordance with the NIH guidelines developed for recombinant DNA and genetic research. Use of any part of the Product constitutes acceptance of the above terms.

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GeneCopoeia, Inc.
9620 Medical Center Drive, Suite 101
Rockville, MD 20850
+1 (301) 762-0888
+1 (866) 360-9531
inquiry@genecopoeia.com