

ExProfile™ Human Tumor Necrosis Factor (TNF) Ligand and Receptor Related Gene qPCR Array

For focused group profiling of human tumor necrosis factor (TNF) ligand and receptor genes expression

Cat. No. QG037-A (1 x 96-well plate, Format A)

Cat. No. QG037-B (1 x 96-well plate, Format B)

Cat. No. QG037-C (1 x 96-well plate, Format C)

Cat. No. QG037-D (1 x 96-well plate, Format D)

Cat. No. QG037-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 tumor necrosis factor (TNF) ligand and receptor related gene qPCR array profiles the expression of 84 human genes related to TNF signaling pathway. These genes are carefully chosen for their close correlation based on a thorough literature search of peer-reviewed publications, mainly including genes involved in TNF superfamily members, TNF receptor superfamily members, TNFR1 and TNFR2 signaling pathway. This array allows researchers to study the related genes to gain understanding of their roles in TNF signaling pathway.

- QG037 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

GeneCopia 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	DFFA	CASP2	HPRT1	TNFRSF8	TRAF3	TRAF2	TRAF1	TNFSF8	CD70	TNFSF5IP1	TNFSF4	TNFSF18
B	TNFSF14	TNFSF13B	TNFSF12	TNFSF10	TNFRSF9	TNFRSF8	CD27	TNFRSF21	TNFRSF1B	TNFRSF1A	TNFRSF19L	TNFRSF19
C	TNFRSF18	TNFRSF17	TNFRSF14	TNFRSF13B	TNFRSF12A	TNFRSF11B	TNFRSF11A	TNFRSF10D	TNFRSF10C	TNFRSF10B	TNFRSF10A	TNFAIP3
D	TNF	SPTAN1	RB1	PARP1	PAK2	PAK1	NGFR	NFKBIA	NFKB1	MAPK8	MAP3K7	MAP3K1
E	MAP2K4	MADD	LTBR	LTA	LMNB2	LMNB1	JUN	IKBKG	IKBKB	HRB	FASLG	FAS
F	FADD	EDA2R	DUSP1	DFFA	CRADD	CHUK	CD40LG	CD40	CASP3	CASP2	CAD	BAG4
G	ARHGDIIB	CASP8	TNFRSF8B	TNFSF15	TNFRSF25	IKBKAP	LMNA	LTB	CD40	TNFSF11	MADD	TNFRSF25
H	HGDC	HGDC	GAPDH	ACTB	B2M	RPL13A	HPRT1	RN18S1	RT	RT	PCR	PCR

Figure1. Illustration of QG037 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
QG037-01	A01	HQP004202	NM_213566	DFFA
QG037-01	A02	HQP020250	NM_032983	CASP2
QG037-01	A03	HQP009026	NM_000194	HPRT1
QG037-01	A04	HQP022754	NM_152942	TNFRSF8
QG037-01	A05	HQP018234	NM_003300	TRAF3
QG037-01	A06	HQP018233	NM_021138	TRAF2
QG037-01	A07	HQP018232	NM_005658	TRAF1
QG037-01	A08	HQP022769	NM_001244	TNFSF8
QG037-01	A09	HQP023108	NM_001252	CD70
QG037-01	A10	HQP015306	NM_020232	TNFSF5IP1
QG037-01	A11	HQP018329	NM_003326	TNFSF4
QG037-01	A12	HQP021834	NM_005092	TNFSF18
QG037-01	B01	HQP021496	NM_003807	TNFSF14
QG037-01	B02	HQP000821	NM_006573	TNFSF13B
QG037-01	B03	HQP021501	NM_003809	TNFSF12
QG037-01	B04	HQP021502	NM_003810	TNFSF10
QG037-01	B05	HQP009716	NM_001561	TNFRSF9
QG037-01	B06	HQP022753	NM_001243	TNFRSF8
QG037-01	B07	HQP022667	NM_001242	CD27
QG037-01	B08	HQP007613	NM_014452	TNFRSF21
QG037-01	B09	HQP018149	NM_001066	TNFRSF1B
QG037-01	B10	HQP018148	NM_001065	TNFRSF1A
QG037-01	B11	HQP021069	NM_032871	TNFRSF19L
QG037-01	B12	HQP014424	NM_018647	TNFRSF19
QG037-01	C01	HQP021536	NM_004195	TNFRSF18
QG037-01	C02	HQP016367	NM_001192	TNFRSF17
QG037-01	C03	HQP021522	NM_003820	TNFRSF14
QG037-01	C04	HQP006148	NM_012452	TNFRSF13B
QG037-01	C05	HQP012651	NM_016639	TNFRSF12A
QG037-01	C06	HQP012049	NM_002546	TNFRSF11B
QG037-01	C07	HQP021550	NM_003839	TNFRSF11A
QG037-01	C08	HQP021551	NM_003840	TNFRSF10D
QG037-01	C09	HQP021552	NM_003841	TNFRSF10C
QG037-01	C10	HQP021553	NM_003842	TNFRSF10B
QG037-01	C11	HQP021557	NM_003844	TNFRSF10A
QG037-01	C12	HQP018145	NM_006290	TNFAIP3
QG037-01	D01	HQP018141	NM_000594	TNF
QG037-01	D02	HQP017688	NM_003127	SPTAN1
QG037-01	D03	HQP016131	NM_000321	RB1
QG037-01	D04	HQP003120	NM_001618	PARP1
QG037-01	D05	HQP012170	NM_002577	PAK2
QG037-01	D06	HQP012156	NM_002576	PAK1

QG037-01	D07	HQP011828	NM_002507	NGFR
QG037-01	D08	HQP011810	NM_020529	NFKBIA
QG037-01	D09	HQP011807	NM_003998	NFKB1
QG037-01	D10	HQP014886	NM_002750	MAPK8
QG037-01	D11	HQP017891	NM_003188	MAP3K7
QG037-01	D12	HQP053966	NM_005921	MAP3K1
QG037-01	E01	HQP016830	NM_003010	MAP2K4
QG037-01	E02	HQP021290	NM_003682	MADD
QG037-01	E03	HQP010915	NM_002342	LTBR
QG037-01	E04	HQP010907	NM_000595	LTA
QG037-01	E05	HQP020961	NM_032737	LMNB2
QG037-01	E06	HQP010680	NM_005573	LMNB1
QG037-01	E07	HQP009853	NM_002228	JUN
QG037-01	E08	HQP021140	NM_003639	IKBKG
QG037-01	E09	HQP009639	NM_001556	IKBKB
QG037-01	E10	HQP009042	NM_004504	HRB
QG037-01	E11	HQP009671	NM_000639	FASLG
QG037-01	E12	HQP009651	NM_000043	FAS
QG037-01	F01	HQP021526	NM_003824	FADD
QG037-01	F02	HQP016300	NM_021783	EDA2R
QG037-01	F03	HQP004498	NM_004417	DUSP1
QG037-01	F04	HQP004201	NM_004401	DFFA
QG037-01	F05	HQP021493	NM_003805	CRADD
QG037-01	F06	HQP001708	NM_001278	CHUK
QG037-01	F07	HQP022962	NM_000074	CD40LG
QG037-01	F08	HQP022955	NM_001250	CD40
QG037-01	F09	HQP020297	NM_004346	CASP3
QG037-01	F10	HQP020249	NM_032982	CASP2
QG037-01	F11	HQP018928	NM_004341	CAD
QG037-01	F12	HQP022871	NM_004874	BAG4
QG037-01	G01	HQP010610	NM_001175	ARHGDI1B
QG037-01	G02	HQP020548	NM_001228	CASP8
QG037-01	G03	HQP021525	NM_003823	TNFRSF6B
QG037-01	G04	HQP023417	NM_005118	TNFSF15
QG037-01	G05	HQP021469	NM_148970	TNFRSF25
QG037-01	G06	HQP021141	NM_003640	IKBKAP
QG037-01	G07	HQP010673	NM_005572	LMNA
QG037-01	G08	HQP010908	NM_002341	LTB
QG037-01	G09	HQP022956	NM_152854	CD40
QG037-01	G10	HQP021321	NM_003701	TNFSF11
QG037-01	G11	HQP021293	NM_130472	MADD
QG037-01	G12	HQP021465	NM_003790	TNFRSF25
QG037-01	H01	HGDC		
QG037-01	H02	HGDC		
QG037-01	H03	HQP006940	NM_002046	GAPDH
QG037-01	H04	HQP016381	NM_001101	ACTB

QG037-01	H05	HQP015171	NM_004048	B2M
QG037-01	H06	HQP006171	NM_012423	RPL13A
QG037-01	H07	HQP009026	NM_000194	HPRT1
QG037-01	H08	HQP054253	NR_003286	RN18S1
QG037-01	H09	RT		
QG037-01	H10	RT		
QG037-01	H11	PCR		
QG037-01	H12	PCR		

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Following terms and conditions apply to use of ExProfile™ Human Tumor Necrosis Factor (TNF) Ligand and Receptor Related 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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