ExProfile^{TM} Human Th1-Th2-Th3 Related Gene qPCR Array

For focused group profiling of human Th1-Th2-Th3 related gene expression

Cat. No. QG055-A (1 x 96-well plate, Format A)
Cat. No. QG055-B (1 x 96-well plate, Format B)
Cat. No. QG055-C (1 x 96-well plate, Format C)
Cat. No. QG055-D (1 x 96-well plate, Format D)
Cat. No. QG055-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 Th1-Th2-Th3 related gene qPCR array profiles the expression of 84 human genes related to three classes of helper T cells: Th1, Th2, and Th3. These genes are carefully chosen for their close pathway correlation based on a thorough literature search of peer-reviewed publications. This array allows researchers to study related genes to gain understanding of their roles in the function and molecular mechanism of helper T cells.

- QG055 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℃

Array format

GeneCopoeia 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^{TM}7 (Standard 96-well block)
B (96-well)	Applied Biosystems	7500 (Fast block), 7900HT (Fast block), StepOnePlus^{TM}, ViiA^{TM}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^{TM} First-Strand cDNA Synthesis Kit
All-in-One^{TM} 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	IL17A	CCL11	CCL5	CCL7	CCR2	CCR4	CCR5	CD28	CD4	CD40LG	IL23A	CD80
B	CD86	CREBBP	CSF2	CTLA4	CXCR3	FASLG	GATA3	GFI1	GLMN	GPR44	HAVCR2	ICOS
C	IFNG	IGSF6	IL10	IL12B	IL12RB2	IL13	IL13RA1	IL15	IL18	IL1R1	IL1R2	IL2
D	IL2RA	IL4	IL4R	IL5	IL6	IL6R	IL7	INHA	INHBA	IRF1	IRF4	JAK1
E	JAK2	MAF	MAP2K7	MAPK8	NFATC1	NFATC2	NFATC2IP	PCGF2	PTPRC	SFTPD	SOCS1	SOCS2
F	SOCS5	SPP1	STAT1	STAT4	STAT6	TBX21	TFCP2	TGFB3	TLR4	TLR6	TMED1	TNF
G	CD27	TNFRSF8	TNFRSF9	TNFSF4	TYK2	YY1	HPRT1	IL6R	NFATC1	PTPRC	TNFRSF8	LAT
H	HGDC	HGDC	GAPDH	ACTB	B2M	RPL13A	HPRT1	RN18S1	RT	RT	PCR	PCR

Figure1. Illustration of QG055 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
QG055-01	A01	HQP009717	NM_002190	IL17A
QG055-01	A02	HQP016629	NM_002986	CCL11
QG055-01	A03	HQP016626	NM_002985	CCL5
QG055-01	A04	HQP016627	NM_006273	CCL7
QG055-01	A05	HQP002201	NM_000648	CCR2
QG055-01	A06	HQP002209	NM_005508	CCR4
QG055-01	A07	HQP002210	NM_000579	CCR5
QG055-01	A08	HQP022699	NM_006139	CD28
QG055-01	A09	HQP022316	NM_000616	CD4
QG055-01	A10	HQP022962	NM_000074	CD40LG
QG055-01	A11	HQP012859	NM_016584	IL23A
QG055-01	A12	HQP022722	NM_005191	CD80
QG055-01	B01	HQP022746	NM_006889	CD86
QG055-01	B02	HQP002921	NM_004380	CREBBP
QG055-01	B03	HQP003159	NM_000758	CSF2
QG055-01	B04	HQP003500	NM_005214	CTLA4
QG055-01	B05	HQP007900	NM_001504	CXCR3
QG055-01	B06	HQP009671	NM_000639	FASLG
QG055-01	B07	HQP007166	NM_002051	GATA3
QG055-01	B08	HQP007363	NM_005263	GFI1
QG055-01	B09	HQP001316	NM_053274	GLMN
QG055-01	B10	HQP001457	NM_004778	GPR44
QG055-01	B11	HQP020984	NM_032782	HAVCR2
QG055-01	B12	HQP008554	NM_012092	ICOS
QG055-01	C01	HQP009467	NM_000619	IFNG
QG055-01	C02	HQP000323	NM_005849	IGSF6
QG055-01	C03	HQP009685	NM_000572	IL10
QG055-01	C04	HQP009693	NM_002187	IL12B
QG055-01	C05	HQP009696	NM_001559	IL12RB2
QG055-01	C06	HQP009697	NM_002188	IL13
QG055-01	C07	HQP009700	NM_001560	IL13RA1
QG055-01	C08	HQP009708	NM_000585	IL15
QG055-01	C09	HQP009718	NM_001562	IL18
QG055-01	C10	HQP009642	NM_000877	IL1R1
QG055-01	C11	HQP018800	NM_004633	IL1R2
QG055-01	C12	HQP009649	NM_000586	IL2
QG055-01	D01	HQP009650	NM_000417	IL2RA
QG055-01	D02	HQP009662	NM_000589	IL4
QG055-01	D03	HQP009664	NM_000418	IL4R
QG055-01	D04	HQP009666	NM_000879	IL5
QG055-01	D05	HQP009670	NM_000600	IL6

QG055-01	D06	HQP009672	NM_000565	IL6R
QG055-01	D07	HQP009676	NM_000880	IL7
QG055-01	D08	HQP009742	NM_002191	INHA
QG055-01	D09	HQP009743	NM_002192	INHBA
QG055-01	D10	HQP009778	NM_002198	IRF1
QG055-01	D11	HQP009781	NM_002460	IRF4
QG055-01	D12	HQP009849	NM_002227	JAK1
QG055-01	E01	HQP009850	NM_004972	JAK2
QG055-01	E02	HQP010969	NM_005360	MAF
QG055-01	E03	HQP014926	NM_145185	MAP2K7
QG055-01	E04	HQP014886	NM_002750	MAPK8
QG055-01	E05	HQP011788	NM_172390	NFATC1
QG055-01	E06	HQP011789	NM_012340	NFATC2
QG055-01	E07	HQP021017	NM_032815	NFATC2IP
QG055-01	E08	HQP018681	NM_007144	PCGF2
QG055-01	E09	HQP015908	NM_002838	PTPRC
QG055-01	E10	HQP016980	NM_003019	SFTPD
QG055-01	E11	HQP021399	NM_003745	SOCS1
QG055-01	E12	HQP021602	NM_003877	SOCS2
QG055-01	F01	HQP054032	NM_144949	SOCS5
QG055-01	F02	HQP017673	NM_000582	SPP1
QG055-01	F03	HQP017764	NM_007315	STAT1
QG055-01	F04	HQP017770	NM_003151	STAT4
QG055-01	F05	HQP017775	NM_003153	STAT6
QG055-01	F06	HQP008682	NM_013351	TBX21
QG055-01	F07	HQP018029	NM_005653	TFCP2
QG055-01	F08	HQP018048	NM_003239	TGFB3
QG055-01	F09	HQP018116	NM_138554	TLR4
QG055-01	F10	HQP000415	NM_006068	TLR6
QG055-01	F11	HQP001156	NM_006858	TMED1
QG055-01	F12	HQP018141	NM_000594	TNF
QG055-01	G01	HQP022667	NM_001242	CD27
QG055-01	G02	HQP022753	NM_001243	TNFRSF8
QG055-01	G03	HQP009716	NM_001561	TNFRSF9
QG055-01	G04	HQP018329	NM_003326	TNFSF4
QG055-01	G05	HQP018340	NM_003331	TYK2
QG055-01	G06	HQP018570	NM_003403	YY1
QG055-01	G07	HQP009026	NM_000194	HPRT1
QG055-01	G08	HQP009673	NM_181359	IL6R
QG055-01	G09	HQP011784	NM_006162	NFATC1
QG055-01	G10	HQP015909	NM_080921	PTPRC
QG055-01	G11	HQP022754	NM_152942	TNFRSF8
QG055-01	G12	HQP007461	NM_001014987	LAT
QG055-01	H01	HGDC		
QG055-01	H02	HGDC		
QG055-01	H03	HQP006940	NM_002046	GAPDH
QG055-01	H04	HQP016381	NM_001101	ACTB

QG055-01	H05	HQP015171	NM_004048	B2M
QG055-01	H06	HQP006171	NM_012423	RPL13A
QG055-01	H07	HQP009026	NM_000194	HPRT1
QG055-01	H08	HQP054253	NR_003286	RN18S1
QG055-01	H09	RT		
QG055-01	H10	RT		
QG055-01	H11	PCR		
QG055-01	H12	PCR		

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Following terms and conditions apply to use of ExProfile™ Human Th1-Th2-Th3 Signaling 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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