ExProfile™ Human T-cell and B-cell Activation Related Gene qPCR Array

For focused group profiling of human T-cell and B-cell activation related gene expression

Cat. No. QG052-A (1 x 96-well plate, Format A)
Cat. No. QG052-B (1 x 96-well plate, Format B)
Cat. No. QG052-C (1 x 96-well plate, Format C)
Cat. No. QG052-D (1 x 96-well plate, Format D)
Cat. No. QG052-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 T-cell & B-cell activation related gene qPCR array profiles the expression of 84 human genes related to T cell and B cell activation. These genes are carefully chosen for their close pathway correlation based on a thorough literature search of peer-reviewed publications, and include genes involved in T cell and B cell activation and their proliferation and differentiation, genes regulating Th1 and Th2 development, T-cell polarization, and genes involved in the activation of macrophages, neutrophils, and natural killer cells. This array allows researchers to study pathway-related genes to gain understanding of their roles in T cell and B cell activation.

- QG052 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™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	AICDA	APOA2	BLNK	BLR1	CCL3	CCL4	CCR1	CCR2	CCR4	CCR5	CD2	CD27
B	CD28	CD3D	CD3E	CD3G	CD4	CD40	CD40LG	CD5	CD7	CD80	CD81	CD86
C	CD8B	CSF2	CX3CL1	CXCR3	CXCR4	FAS	FASLG	GALNAC4S-6ST	HDAC4	HDAC5	HDAC7A	HLA-DRA
D	ICOSLG	IFNB1	IFNG	IFNGR1	IFNGR2	IGBP1	IL10	IL12A	IL12B	IL12RB1	IL12RB2	IL13
E	IL18	IL2	IL2RA	IL4	IL4R	IL5	IL8	INHA	INHBA	IRF4	KIF13B	KLF6
F	MS4A1	NCK1	NOS2A	PRLR	PVRL1	RGS1	SFTPD	SOCS5	TGFB1	TLR1	TLR2	TLR4
G	TLR6	TLR9	TNFSF14	TOLLIP	CLEC7A	HPRT1	FAS	HDAC9	NCK2	CD8A	IL11	IL18R1
H	**HGDC**	**HGDC**	**GAPDH**	**ACTB**	**B2M**	**RPL13A**	**HPRT1**	**RN18S1**	**RT**	**RT**	**PCR**	**PCR**

Figure1. Illustration of QG052 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
QG052-01	A01	HQP015565	NM_020661	AICDA
QG052-01	A02	HQP009139	NM_001643	APOA2
QG052-01	A03	HQP008515	NM_013314	BLNK
QG052-01	A04	HQP016959	NM_001716	BLR1
QG052-01	A05	HQP016622	NM_002983	CCL3
QG052-01	A06	HQP016625	NM_002984	CCL4
QG052-01	A07	HQP002198	NM_001295	CCR1
QG052-01	A08	HQP002201	NM_000648	CCR2
QG052-01	A09	HQP002209	NM_005508	CCR4
QG052-01	A10	HQP002210	NM_000579	CCR5
QG052-01	A11	HQP022190	NM_001767	CD2
QG052-01	A12	HQP022667	NM_001242	CD27
QG052-01	B01	HQP022699	NM_006139	CD28
QG052-01	B02	HQP022212	NM_000732	CD3D
QG052-01	B03	HQP022236	NM_000733	CD3E
QG052-01	B04	HQP022256	NM_000073	CD3G
QG052-01	B05	HQP022316	NM_000616	CD4
QG052-01	B06	HQP022955	NM_001250	CD40
QG052-01	B07	HQP022962	NM_000074	CD40LG
QG052-01	B08	HQP022337	NM_014207	CD5
QG052-01	B09	HQP022399	NM_006137	CD7
QG052-01	B10	HQP022722	NM_005191	CD80
QG052-01	B11	HQP023168	NM_004356	CD81
QG052-01	B12	HQP022746	NM_006889	CD86
QG052-01	C01	HQP022438	NM_004931	CD8B
QG052-01	C02	HQP003159	NM_000758	CSF2
QG052-01	C03	HQP016652	NM_002996	CX3CL1
QG052-01	C04	HQP007900	NM_001504	CXCR3
QG052-01	C05	HQP018803	NM_003467	CXCR4
QG052-01	C06	HQP009651	NM_000043	FAS
QG052-01	C07	HQP009671	NM_000639	FASLG
QG052-01	C08	HQP012676	NM_015892	GALNAC4S-6ST
QG052-01	C09	HQP023167	NM_006037	HDAC4
QG052-01	C10	HQP000024	NM_005474	HDAC5
QG052-01	C11	HQP012862	NM_016596	HDAC7A
QG052-01	C12	HQP008866	NM_019111	HLA-DRA
QG052-01	D01	HQP005977	NM_015259	ICOSLG
QG052-01	D02	HQP009463	NM_002176	IFNB1
QG052-01	D03	HQP009467	NM_000619	IFNG
QG052-01	D04	HQP009469	NM_000416	IFNGR1
QG052-01	D05	HQP009472	NM_005534	IFNGR2

QG052-01	D06	HQP009505	NM_001551	IGBP1
QG052-01	D07	HQP009685	NM_000572	IL10
QG052-01	D08	HQP009692	NM_000882	IL12A
QG052-01	D09	HQP009693	NM_002187	IL12B
QG052-01	D10	HQP009694	NM_005535	IL12RB1
QG052-01	D11	HQP009696	NM_001559	IL12RB2
QG052-01	D12	HQP009697	NM_002188	IL13
QG052-01	E01	HQP009718	NM_001562	IL18
QG052-01	E02	HQP009649	NM_000586	IL2
QG052-01	E03	HQP009650	NM_000417	IL2RA
QG052-01	E04	HQP009662	NM_000589	IL4
QG052-01	E05	HQP009664	NM_000418	IL4R
QG052-01	E06	HQP009666	NM_000879	IL5
QG052-01	E07	HQP009678	NM_000584	IL8
QG052-01	E08	HQP009742	NM_002191	INHA
QG052-01	E09	HQP009743	NM_002192	INHBA
QG052-01	E10	HQP009781	NM_002460	IRF4
QG052-01	E11	HQP005972	NM_015254	KIF13B
QG052-01	E12	HQP053978	NM_001300	KLF6
QG052-01	F01	HQP022527	NM_021950	MS4A1
QG052-01	F02	HQP011697	NM_006153	NCK1
QG052-01	F03	HQP011866	NM_000625	NOS2A
QG052-01	F04	HQP015027	NM_000949	PRLR
QG052-01	F05	HQP015956	NM_002855	PVRL1
QG052-01	F06	HQP016251	NM_002922	RGS1
QG052-01	F07	HQP016980	NM_003019	SFTPD
QG052-01	F08	HQP054032	NM_144949	SOCS5
QG052-01	F09	HQP018044	NM_000660	TGFB1
QG052-01	F10	HQP018113	NM_003263	TLR1
QG052-01	F11	HQP018114	NM_003264	TLR2
QG052-01	F12	HQP018116	NM_138554	TLR4
QG052-01	G01	HQP000415	NM_006068	TLR6
QG052-01	G02	HQP013388	NM_017442	TLR9
QG052-01	G03	HQP021496	NM_003807	TNFSF14
QG052-01	G04	HQP013496	NM_019009	TOLLIP
QG052-01	G05	HQP017052	NM_197954	CLEC7A
QG052-01	G06	HQP009026	NM_000194	HPRT1
QG052-01	G07	HQP009653	NM_152872	FAS
QG052-01	G08	HQP023134	NM_014707	HDAC9
QG052-01	G09	HQP020713	NM_001004722	NCK2
QG052-01	G10	HQP022418	NM_001768	CD8A
QG052-01	G11	HQP009688	NM_000641	IL11
QG052-01	G12	HQP021570	NM_003855	IL18R1
QG052-01	H01	HGDC		
QG052-01	H02	HGDC		
QG052-01	H03	HQP006940	NM_002046	GAPDH
QG052-01	H04	HQP016381	NM_001101	ACTB

QG052-01	H05	HQP015171	NM_004048	B2M
QG052-01	H06	HQP006171	NM_012423	RPL13A
QG052-01	H07	HQP009026	NM_000194	HPRT1
QG052-01	H08	HQP054253	NR_003286	RN18S1
QG052-01	H09	RT		
QG052-01	H10	RT		
QG052-01	H11	PCR		
QG052-01	H12	PCR		

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Following terms and conditions apply to use of ExProfile™ Human T-cell and B-cell Activation 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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