

## ExProfile™ Human Interferon Signaling & Response Related Gene qPCR Array

For focused group profiling of human interferon signaling & response related gene expression

Cat. No. QG029-A (1 x 96-well plate, Format A)

Cat. No. QG029-B (1 x 96-well plate, Format B)

Cat. No. QG029-C (1 x 96-well plate, Format C)

Cat. No. QG029-D (1 x 96-well plate, Format D)

Cat. No. QG029-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 interferon signaling & response related gene qPCR array profiles the expression of 84 interferon-related genes. These genes are carefully chosen for their close pathway correlation based on a thorough literature search of peer-reviewed publications, including genes that encode type I, II, and III interferons and their receptors, components of the JAK-STAT signaling pathway that are involved in interferon signaling, a large multitude of interferon response genes, and cytokines that induce the interferon response. This array allows researchers to study pathway-related genes to gain understanding of their roles in the interferon response and signal transduction.

- QG029 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
<b>A</b> (96-well)	Applied Biosystems	5700, 7000, 7300, 7500, 7700, 7900HT (Standard 96-well block), ViiA™7 (Standard 96-well block)
<b>B</b> (96-well)	Applied Biosystems	7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA™7 (Fast block)
<b>C</b> (96-well)	Bio-Rad Laboratories	iCycler iQ®, MyiQ™, iQ™5
<b>D</b> (96-well)	Bio-Rad Laboratories	CFX96™, DNA Engine Opticon™, DNA Engine Opticon 2™, Chromo4™
<b>E</b> (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	IFNG	IL10	IL2	HLA-DRA	IL6	TNFSF10	IL1B	STAT3	IL12B	TGFB1	TAP1	CXCL9
B	MX1	TYK2	JAK2	F2	CXCL10	IFNB1	PIAS1	MYC	EIF2AK2	HDAC1	IKBKE	TICAM1
C	TP53	CIITA	RB1	IFNGR1	IL4R	IL10RB	IFIT1	IRF3	GBP1	IRF8	IL6ST	IRF1
D	IRF2	JAK1	IRF4	MYD88	TRIM21	STAT4	STAT2	IFI16	IFNGR2	IRF6	IFI30	IFI44
E	STAT1	TLR7	VISA	RNASEL	IFIH1	FAS	SPP1	IFNAR1	IFNAR2	ADAR	IFIT3	OAS1
F	OAS2	EIF4G2	IRF2BP2	SPI1	CASP1	IFIT2	IRF7	HLA-A	IFNA5	IFNA16	IRF5	ISG20
G	PSMB9	IFITM1	PRKRA	SOCS1	PRKRIR	ISG15	CXCL11	IFI27	IFI35	PSME1	IRF2BP1	USP18
H	HGDC	HGDC	GAPDH	ACTB	B2M	RPL13A	HPRT1	RN18S1	RT	RT	PCR	PCR

Figure1. Illustration of QG029 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
QG029-01	A01	HQP009467	NM_000619	IFNG
QG029-01	A02	HQP009685	NM_000572	IL10
QG029-01	A03	HQP009649	NM_000586	IL2
QG029-01	A04	HQP008866	NM_019111	HLA-DRA
QG029-01	A05	HQP009670	NM_000600	IL6
QG029-01	A06	HQP021502	NM_003810	TNFSF10
QG029-01	A07	HQP009641	NM_000576	IL1B
QG029-01	A08	HQP017767	NM_003150	STAT3
QG029-01	A09	HQP009693	NM_002187	IL12B
QG029-01	A10	HQP018044	NM_000660	TGFB1
QG029-01	A11	HQP017899	NM_000593	TAP1
QG029-01	A12	HQP011220	NM_002416	CXCL9
QG029-01	B01	HQP011582	NM_002462	MX1
QG029-01	B02	HQP018340	NM_003331	TYK2
QG029-01	B03	HQP009850	NM_004972	JAK2
QG029-01	B04	HQP005052	NM_000506	F2
QG029-01	B05	HQP009746	NM_001565	CXCL10
QG029-01	B06	HQP009463	NM_002176	IFNB1
QG029-01	B07	HQP021271	NM_016166	PIAS1
QG029-01	B08	HQP011597	NM_002467	MYC
QG029-01	B09	HQP014948	NM_002759	EIF2AK2
QG029-01	B10	HQP008745	NM_004964	HDAC1
QG029-01	B11	HQP023021	NM_014002	IKBKE
QG029-01	B12	HQP003420	NM_182919	TICAM1
QG029-01	C01	HQP018175	NM_000546	TP53
QG029-01	C02	HQP011211	NM_000246	CIITA
QG029-01	C03	HQP016131	NM_000321	RB1
QG029-01	C04	HQP009469	NM_000416	IFNGR1
QG029-01	C05	HQP009664	NM_000418	IL4R
QG029-01	C06	HQP009687	NM_000628	IL10RB
QG029-01	C07	HQP009408	NM_001548	IFIT1
QG029-01	C08	HQP009780	NM_001571	IRF3
QG029-01	C09	HQP007221	NM_002053	GBP1
QG029-01	C10	HQP009251	NM_002163	IRF8
QG029-01	C11	HQP009674	NM_002184	IL6ST
QG029-01	C12	HQP009778	NM_002198	IRF1
QG029-01	D01	HQP009779	NM_002199	IRF2
QG029-01	D02	HQP009849	NM_002227	JAK1
QG029-01	D03	HQP009781	NM_002460	IRF4
QG029-01	D04	HQP011603	NM_002468	MYD88
QG029-01	D05	HQP017729	NM_003141	TRIM21

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QG029-01	D06	HQP017770	NM_003151	STAT4
QG029-01	D07	HQP017766	NM_005419	STAT2
QG029-01	D08	HQP009379	NM_005531	IFI16
QG029-01	D09	HQP009472	NM_005534	IFNGR2
QG029-01	D10	HQP009784	NM_006147	IRF6
QG029-01	D11	HQP000520	NM_006332	IFI30
QG029-01	D12	HQP000670	NM_006417	IFI44
QG029-01	E01	HQP017764	NM_007315	STAT1
QG029-01	E02	HQP012591	NM_016562	TLR7
QG029-01	E03	HQP015659	NM_020746	VISA
QG029-01	E04	HQP016303	NM_021133	RNASEL
QG029-01	E05	HQP016808	NM_022168	IFIH1
QG029-01	E06	HQP009651	NM_000043	FAS
QG029-01	E07	HQP017673	NM_000582	SPP1
QG029-01	E08	HQP009458	NM_000629	IFNAR1
QG029-01	E09	HQP009460	NM_000874	IFNAR2
QG029-01	E10	HQP000471	NM_001025107	ADAR
QG029-01	E11	HQP009416	NM_001031683	IFIT3
QG029-01	E12	HQP011983	NM_001032409	OAS1
QG029-01	F01	HQP011988	NM_001032731	OAS2
QG029-01	F02	HQP004683	NM_001042559	EIF4G2
QG029-01	F03	HQP009703	NM_001077397	IRF2BP2
QG029-01	F04	HQP017662	NM_001080547	SPI1
QG029-01	F05	HQP020207	NM_001223	CASP1
QG029-01	F06	HQP009403	NM_001547	IFIT2
QG029-01	F07	HQP009785	NM_001572	IRF7
QG029-01	F08	HQP008849	NM_002116	HLA-A
QG029-01	F09	HQP009427	NM_002169	IFNA5
QG029-01	F10	HQP009446	NM_002173	IFNA16
QG029-01	F11	HQP009782	NM_002200	IRF5
QG029-01	F12	HQP009789	NM_002201	ISG20
QG029-01	G01	HQP015311	NM_002800	PSMB9
QG029-01	G02	HQP021142	NM_003641	IFITM1
QG029-01	G03	HQP021305	NM_003690	PRKRA
QG029-01	G04	HQP021399	NM_003745	SOCS1
QG029-01	G05	HQP014969	NM_004705	PRKRIR
QG029-01	G06	HQP023013	NM_005101	ISG15
QG029-01	G07	HQP016649	NM_005409	CXCL11
QG029-01	G08	HQP009385	NM_005532	IFI27
QG029-01	G09	HQP009393	NM_005533	IFI35
QG029-01	G10	HQP015499	NM_006263	PSME1
QG029-01	G11	HQP007080	NM_015649	IRF2BP1
QG029-01	G12	HQP001496	NM_017414	USP18
QG029-01	H01	HGDC		
QG029-01	H02	HGDC		
QG029-01	H03	HQP006940	NM_002046	GAPDH
QG029-01	H04	HQP016381	NM_001101	ACTB

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QG029-01	H05	HQP015171	NM_004048	B2M
QG029-01	H06	HQP006171	NM_012423	RPL13A
QG029-01	H07	HQP009026	NM_000194	HPRT1
QG029-01	H08	HQP054253	NR_003286	RN18S1
QG029-01	H09	RT		
QG029-01	H10	RT		
QG029-01	H11	PCR		
QG029-01	H12	PCR		

### Limited Use License

Following terms and conditions apply to use of ExProfile™ Human Interferon Signaling & Response 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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