

ExProfile™ Human NFΚΒ Signaling Pathway Related Gene qPCR Array

For focused group profiling of human NFΚΒ signaling pathway related gene expression

Cat. No. QG035-A (1 x 96-well plate, Format A)

Cat. No. QG035-B (1 x 96-well plate, Format B)

Cat. No. QG035-C (1 x 96-well plate, Format C)

Cat. No. QG035-D (1 x 96-well plate, Format D)

Cat. No. QG035-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 NFΚΒ signaling related gene qPCR array profiles the expression of 84 human genes related to NFκB-mediated signal transduction. These genes are carefully chosen for their close pathway correlation based on a thorough literature search of peer-reviewed publications, and include genes that encode members of the Rel, NFκB, and IκB families, NFκB-responsive genes, extracellular ligands and receptors that activate the pathway, and kinases and transcription factors that propagate the signal. This array allows researchers to study pathway-related genes to gain understanding of their roles in the NFκB signaling pathway.

- QG035 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
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	TP53	IRAK1BP1	LCK	BIRC4	CHUK	MAPK14	HDAC2	IKBKB	IRAK2	RHOA	CSNK2A2	EGF
B	GSK3B	MYD88	MAP2K6	EIF2AK2	RAF1	REL	MAP2K4	NR2C2	IKBKG	RIPK1	RIPK2	TNFRSF11A
C	CFLAR	PCAF	MAP3K14	NFKB1	TANK	HDAC1	MAP3K8	ELK1	FOS	NOD1	TNFAIP3	RELB
D	MALT1	RIPK3	STAT1	TBK1	IKBKE	PDCD11	MAP3K7IP2	NFKBIA	VISA	TRAF2	NOD2	RNF25
E	CARD11	MAP2K7	TRAF3IP2	MAP3K7IP3	MAP3K7	MAPK3	TIRAP	NFKB2	CASP1	MAP3K3	MAPK8	BTRC
F	TRAF5	TRAF3	PRKCZ	JUN	AZI2	CARD6	BCL10	NKRF	CASP8	TRAF6	SNIP1	FADD
G	TIFA	CREBBP	RELA	ADIPOQ	TNIP2	AKT1	EGR1	CARD14	BCL3	IRAK1	MAPK11	CARD10
H	HGDC	HGDC	GAPDH	ACTB	B2M	RPL13A	HPRT1	RN18S1	RT	RT	PCR	PCR

Figure1. Illustration of QG035 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
QG035-01	A01	HQP018175	NM_000546	TP53
QG035-01	A02	HQP002792	NM_001010844	IRAK1BP1
QG035-01	A03	HQP010565	NM_001042771	LCK
QG035-01	A04	HQP009091	NM_001167	BIRC4
QG035-01	A05	HQP001708	NM_001278	CHUK
QG035-01	A06	HQP003133	NM_001315	MAPK14
QG035-01	A07	HQP008746	NM_001527	HDAC2
QG035-01	A08	HQP009639	NM_001556	IKBKB
QG035-01	A09	HQP009776	NM_001570	IRAK2
QG035-01	A10	HQP010229	NM_001664	RHOA
QG035-01	A11	HQP003285	NM_001896	CSNK2A2
QG035-01	A12	HQP004599	NM_001963	EGF
QG035-01	B01	HQP008469	NM_002093	GSK3B
QG035-01	B02	HQP011603	NM_002468	MYD88
QG035-01	B03	HQP014919	NM_002758	MAP2K6
QG035-01	B04	HQP014948	NM_002759	EIF2AK2
QG035-01	B05	HQP016088	NM_002880	RAF1
QG035-01	B06	HQP016208	NM_002908	REL
QG035-01	B07	HQP016830	NM_003010	MAP2K4
QG035-01	B08	HQP018230	NM_003298	NR2C2
QG035-01	B09	HQP021140	NM_003639	IKBKG
QG035-01	B10	HQP021492	NM_003804	RIPK1
QG035-01	B11	HQP021524	NM_003821	RIPK2
QG035-01	B12	HQP021550	NM_003839	TNFRSF11A
QG035-01	C01	HQP021604	NM_003879	CFLAR
QG035-01	C02	HQP021621	NM_003884	PCAF
QG035-01	C03	HQP021888	NM_003954	MAP3K14
QG035-01	C04	HQP011807	NM_003998	NFKB1
QG035-01	C05	HQP000019	NM_004180	TANK
QG035-01	C06	HQP008745	NM_004964	HDAC1
QG035-01	C07	HQP002725	NM_005204	MAP3K8
QG035-01	C08	HQP004749	NM_005229	ELK1
QG035-01	C09	HQP006188	NM_005252	FOS
QG035-01	C10	HQP000459	NM_006092	NOD1
QG035-01	C11	HQP018145	NM_006290	TNFAIP3
QG035-01	C12	HQP016214	NM_006509	RELB
QG035-01	D01	HQP001017	NM_006785	MALT1
QG035-01	D02	HQP001177	NM_006871	RIPK3
QG035-01	D03	HQP017764	NM_007315	STAT1
QG035-01	D04	HQP008428	NM_013254	TBK1
QG035-01	D05	HQP023021	NM_014002	IKBKE

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QG035-01	D06	HQP005639	NM_014976	PDCD11
QG035-01	D07	HQP005773	NM_015093	MAP3K7IP2
QG035-01	D08	HQP011810	NM_020529	NFKBIA
QG035-01	D09	HQP015659	NM_020746	VISA
QG035-01	D10	HQP018233	NM_021138	TRAF2
QG035-01	D11	HQP016801	NM_022162	NOD2
QG035-01	D12	HQP016904	NM_022453	RNF25
QG035-01	E01	HQP020718	NM_032415	CARD11
QG035-01	E02	HQP014926	NM_145185	MAP2K7
QG035-01	E03	HQP000892	NM_147200	TRAF3IP2
QG035-01	E04	HQP006695	NM_152787	MAP3K7IP3
QG035-01	E05	HQP017891	NM_003188	MAP3K7
QG035-01	E06	HQP014854	NM_001040056	MAPK3
QG035-01	E07	HQP001674	NM_001039661	TIRAP
QG035-01	E08	HQP011808	NM_001077493	NFKB2
QG035-01	E09	HQP020207	NM_001223	CASP1
QG035-01	E10	HQP011164	NM_002401	MAP3K3
QG035-01	E11	HQP014886	NM_002750	MAPK8
QG035-01	E12	HQP021752	NM_003939	BTRC
QG035-01	F01	HQP018236	NM_001033910	TRAF5
QG035-01	F02	HQP018234	NM_003300	TRAF3
QG035-01	F03	HQP014829	NM_001033581	PRKCZ
QG035-01	F04	HQP009853	NM_002228	JUN
QG035-01	F05	HQP016926	NM_022461	AZI2
QG035-01	F06	HQP020867	NM_032587	CARD6
QG035-01	F07	HQP021725	NM_003921	BCL10
QG035-01	F08	HQP014840	NM_017544	NKRF
QG035-01	F09	HQP018966	NM_001080124	CASP8
QG035-01	F10	HQP018237	NM_004620	TRAF6
QG035-01	F11	HQP019226	NM_024700	SNIP1
QG035-01	F12	HQP021526	NM_003824	FADD
QG035-01	G01	HQP022424	NM_052864	TIFA
QG035-01	G02	HQP002920	NM_001079846	CREBBP
QG035-01	G03	HQP016213	NM_021975	RELA
QG035-01	G04	HQP022625	NM_004797	ADIPOQ
QG035-01	G05	HQP018961	NM_024309	TNIP2
QG035-01	G06	HQP004991	NM_001014431	AKT1
QG035-01	G07	HQP004612	NM_001964	EGR1
QG035-01	G08	HQP018917	NM_024110	CARD14
QG035-01	G09	HQP016287	NM_005178	BCL3
QG035-01	G10	HQP009771	NM_001025242	IRAK1
QG035-01	G11	HQP014895	NM_002751	MAPK11
QG035-01	G12	HQP008522	NM_014550	CARD10
QG035-01	H01	HGDC		
QG035-01	H02	HGDC		
QG035-01	H03	HQP006940	NM_002046	GAPDH
QG035-01	H04	HQP016381	NM_001101	ACTB

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QG035-01	H05	HQP015171	NM_004048	B2M
QG035-01	H06	HQP006171	NM_012423	RPL13A
QG035-01	H07	HQP009026	NM_000194	HPRT1
QG035-01	H08	HQP054253	NR_003286	RN18S1
QG035-01	H09	RT		
QG035-01	H10	RT		
QG035-01	H11	PCR		
QG035-01	H12	PCR		

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