ExProfile™ Human Heat Shock Proteins Related Gene qPCR Array

For focused group profiling of human heat shock proteins genes expression

Cat. No. QG090-A (1 x 96-well plate, Format A)
Cat. No. QG090-B (1 x 96-well plate, Format B)
Cat. No. QG090-C (1 x 96-well plate, Format C)
Cat. No. QG090-D (1 x 96-well plate, Format D)
Cat. No. QG090-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 heat shock proteins related gene qPCR array profiles the expression of 84 human genes related to heat shock proteins. These genes are carefully chosen for their close pathway correlation based on a thorough literature search of peer-reviewed publications, mainly including genes that encode various heat shock proteins and other chaperone cofactors involved in protein folding or the response to unfolded/misfolded proteins. This array allows researchers to study the related genes to gain understanding of their roles in the functioning and characterization of protein folding.

- QG090 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℃

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 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	TCP1	HPRT1	CCT7	SIL1	SERPINH1	PFDN1	HSPH1	HSPE1	HSPD1	HSPB8	HSPB2	HSPB1
B	HSPA9	HSPA8	HSPA5	HSPA4L	HSPA4	HSPA2	HSPA1L	HSPA1B	HSPA1A	HSPA14	HSP90B1	HSP90AB1
C	HSP90AA1	HSF1	DNAJC9	DNAJC8	DNAJC7	DNAJC6	DNAJC5G	DNAJC3	DNAJC19	DNAJC18	DNAJC17	DNAJC16
D	DNAJC15	DNAJC14	DNAJC13	DNAJC11	DNAJC10	DNAJC1	DNAJB9	DNAJB7	DNAJB6	DNAJB13	DNAJB12	DNAJB11
E	DNAJB1	DNAJA4	DNAJA3	DNAJA1	CRYAA	CCT7	CCT6B	CCT6A	CCT4	CCT2	CABC1	BAG5
F	BAG4	BAG3	BAG2	BAG1	ATF6	DNAJA5	DNAJB8	CCS	CCT3	DNAJA2	DNAJB14	DNAJB2
G	DNAJB5	DNAJC12	DNAJC4	DNAJC5	HSF2	HSF4	HSPB3	HSPB6	HSPB7	TCP1	TOR1A	HSP90AA1
H	**HGDC**	**HGDC**	**GAPDH**	**ACTB**	**B2M**	**RPL13A**	**HPRT1**	**RN18S1**	**RT**	**RT**	**PCR**	**PCR**

Figure1. Illustration of QG090 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
QG090-01	A01	HQP017984	NM_001008897	TCP1
QG090-01	A02	HQP009026	NM_000194	HPRT1
QG090-01	A03	HQP000684	NM_001009570	CCT7
QG090-01	A04	HQP054023	NM_022464	SIL1
QG090-01	A05	HQP021470	NM_001235	SERPINH1
QG090-01	A06	HQP013063	NM_002622	PFDN1
QG090-01	A07	HQP000946	NM_006644	HSPH1
QG090-01	A08	HQP009102	NM_002157	HSPE1
QG090-01	A09	HQP009098	NM_002156	HSPD1
QG090-01	A10	HQP007224	NM_014365	HSPB8
QG090-01	A11	HQP009090	NM_001541	HSPB2
QG090-01	A12	HQP009089	NM_001540	HSPB1
QG090-01	B01	HQP009088	NM_004134	HSPA9
QG090-01	B02	HQP009086	NM_006597	HSPA8
QG090-01	B03	HQP009083	NM_005347	HSPA5
QG090-01	B04	HQP005480	NM_014278	HSPA4L
QG090-01	B05	HQP009081	NM_002154	HSPA4
QG090-01	B06	HQP009080	NM_021979	HSPA2
QG090-01	B07	HQP009079	NM_005527	HSPA1L
QG090-01	B08	HQP009078	NM_005346	HSPA1B
QG090-01	B09	HQP009077	NM_005345	HSPA1A
QG090-01	B10	HQP012484	NM_016299	HSPA14
QG090-01	B11	HQP018231	NM_003299	HSP90B1
QG090-01	B12	HQP009097	NM_007355	HSP90AB1
QG090-01	C01	HQP009092	NM_001017963	HSP90AA1
QG090-01	C02	HQP009068	NM_005526	HSF1
QG090-01	C03	HQP005896	NM_015190	DNAJC9
QG090-01	C04	HQP005481	NM_014280	DNAJC8
QG090-01	C05	HQP018283	NM_003315	DNAJC7
QG090-01	C06	HQP023249	NM_014787	DNAJC6
QG090-01	C07	HQP008106	NM_173650	DNAJC5G
QG090-01	C08	HQP014959	NM_006260	DNAJC3
QG090-01	C09	HQP002664	NM_145261	DNAJC19
QG090-01	C10	HQP004849	NM_152686	DNAJC18
QG090-01	C11	HQP014150	NM_018163	DNAJC17
QG090-01	C12	HQP006007	NM_015291	DNAJC16
QG090-01	D01	HQP008418	NM_013238	DNAJC15

QG090-01	D02	HQP021208	NM_032364	DNAJC14
QG090-01	D03	HQP005987	NM_015268	DNAJC13
QG090-01	D04	HQP014645	NM_018198	DNAJC11
QG090-01	D05	HQP013460	NM_018981	DNAJC10
QG090-01	D06	HQP016849	NM_022365	DNAJC1
QG090-01	D07	HQP011131	NM_012328	DNAJB9
QG090-01	D08	HQP003565	NM_145174	DNAJB7
QG090-01	D09	HQP000063	NM_005494	DNAJB6
QG090-01	D10	HQP009886	NM_153614	DNAJB13
QG090-01	D11	HQP054017	NM_017626	DNAJB12
QG090-01	D12	HQP012988	NM_016306	DNAJB11
QG090-01	E01	HQP009103	NM_006145	DNAJB1
QG090-01	E02	HQP014408	NM_018602	DNAJA4
QG090-01	E03	HQP022055	NM_005147	DNAJA3
QG090-01	E04	HQP009076	NM_001539	DNAJA1
QG090-01	E05	HQP003088	NM_000394	CRYAA
QG090-01	E06	HQP000685	NM_006429	CCT7
QG090-01	E07	HQP000837	NM_006584	CCT6B
QG090-01	E08	HQP022049	NM_001762	CCT6A
QG090-01	E09	HQP000686	NM_006430	CCT4
QG090-01	E10	HQP000687	NM_006431	CCT2
QG090-01	E11	HQP015320	NM_020247	CABC1
QG090-01	E12	HQP053998	NM_004873	BAG5
QG090-01	F01	HQP022871	NM_004874	BAG4
QG090-01	F02	HQP022872	NM_004281	BAG3
QG090-01	F03	HQP022873	NM_004282	BAG2
QG090-01	F04	HQP015574	NM_004323	BAG1
QG090-01	F05	HQP005596	NM_007348	ATF6
QG090-01	F06	HQP002772	NM_194283	DNAJA5
QG090-01	F07	HQP004148	NM_153330	DNAJB8
QG090-01	F08	HQP023439	NM_005125	CCS
QG090-01	F09	HQP018245	NM_005998	CCT3
QG090-01	F10	HQP000360	NM_005880	DNAJA2
QG090-01	F11	HQP019443	NM_024920	DNAJB14
QG090-01	F12	HQP009075	NM_006736	DNAJB2
QG090-01	G01	HQP006755	NM_012266	DNAJB5
QG090-01	G02	HQP015099	NM_201262	DNAJC12
QG090-01	G03	HQP009104	NM_005528	DNAJC4
QG090-01	G04	HQP019673	NM_025219	DNAJC5
QG090-01	G05	HQP009069	NM_004506	HSF2
QG090-01	G06	HQP009071	NM_001538	HSF4

QG090-01	G07	HQP021814	NM_006308	HSPB3
QG090-01	G08	HQP002378	NM_144617	HSPB6
QG090-01	G09	HQP007533	NM_014424	HSPB7
QG090-01	G10	HQP017985	NM_030752	TCP1
QG090-01	G11	HQP004523	NM_000113	TOR1A
QG090-01	G12	HQP009093	NM_005348	HSP90AA1
QG090-01	H01	HGDC		
QG090-01	H02	HGDC		
QG090-01	H03	HQP006940	NM_002046	GAPDH
QG090-01	H04	HQP016381	NM_001101	ACTB
QG090-01	H05	HQP015171	NM_004048	B2M
QG090-01	H06	HQP006171	NM_012423	RPL13A
QG090-01	H07	HQP009026	NM_000194	HPRT1
QG090-01	H08	HQP054253	NR_003286	RN18S1
QG090-01	H09	RT		
QG090-01	H10	RT		
QG090-01	H11	PCR		
QG090-01	H12	PCR		

Limited Use License

Following terms and conditions apply to use of ExProfile™ Human Heat Shock Proteins 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.

Limited Warranty

GeneCopoeia warrants that the Product meets the specifications described in the accompanying Product Datasheet. If it is proven to the satisfaction of GeneCopoeia that the Product fails to meet these specifications, GeneCopoeia will replace the Product. In the event a replacement cannot be provided, GeneCopoeia will provide the purchaser with a refund. This limited warranty shall not extend to anyone other than the original purchaser of the Product. Notice of nonconforming products must be made to GeneCopoeia within 30 days of receipt of the Product. GeneCopoeia's liability is expressly limited to replacement of Product or a refund limited to the actual purchase price.
GeneCopoeia's liability does not extend to any damages arising from use or improper use of the Product, or losses associated with the use of additional materials or reagents. This limited warranty is the sole and exclusive warranty. GeneCopoeia does not provide any other warranties of any kind, expressed or implied, including the merchantability or fitness of the Product for a particular purpose.

GeneCopoeia is committed to providing our customers with high-quality products. If you should have any questions or concerns about any GeneCopoeia products, please contact us at 301-762-0888.

GeneCopoeia, Inc.
9620 Medical Center Drive, Suite 101
Rockville, MD 20850
+1 (301) 762-0888
+1 (866) 360-9531
inquiry@genecopoeia.com