ExProfile™ Human Neurodegeneration Related Gene qPCR Array

For focused group profiling of human neurodegeneration genes expression

Cat. No. QG084-A (1 x 96-well plate, Format A)
Cat. No. QG084-B (1 x 96-well plate, Format B)
Cat. No. QG084-C (1 x 96-well plate, Format C)
Cat. No. QG084-D (1 x 96-well plate, Format D)
Cat. No. QG084-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 neurodegeneration related gene qPCR array profiles the expression of 84 human genes related to neurodegeneration. These genes are carefully chosen for their close correlation based on a thorough literature search of peer-reviewed publications, mainly including genes that have been identified as important in many neurodegenerative diseases, such as Alzheimer's, Huntington's, Parkinson's, ALS. This array allows researchers to study the related genes to gain understanding of their roles in the functioning and characterization of neurodegeneration.

- QG084 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	UBE2L3	UBE1	TP53	TH	TGM2	SSR4	SOD1	SNCAIP	SNCA	SLC1A2	RASA1	PSENEN
B	PSEN1	PRNP	PPP3CA	PLEKHA8	PARK7	PARK2	NFE2L2	NEFM	NEFL	NEFH	NCSTN	NCOR1
C	MME	MAGI1	LRP1	LPL	LAMB1	LAMA1	KARS	ITCH	INSR	INS	IFT57	HSPD1
D	HSPA5	HIP2	HIP1	HDAC6	HD	GSK3B	GRB2	GPX1	GPR37	GFAP	GAPDH	DCTN1
E	CREBBP	CLTC	CBS	CASP8	CASP6	CASP3	CASP1	CALML5	CALM3	CALM2	CALM1	BCL2L1
F	BCL2	BAX	BAIAP2	BAD	BACE2	BACE1	ATN1	APPBP1	APP	APOE	APH1A	APBB1
G	ALS2	A2M	5-Sep	RERE	BDNF	CAT	RPSA	UBE2G2	HAP1	IDE	LAMC1	MAPT
H	**HGDC**	**HGDC**	**GAPDH**	**ACTB**	**B2M**	**RPL13A**	**HPRT1**	**RN18S1**	**RT**	**RT**	**PCR**	**PCR**

Figure1. Illustration of QG084 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
QG084-01	A01	HQP018381	NM_003347	UBE2L3
QG084-01	A02	HQP018357	NM_003334	UBE1
QG084-01	A03	HQP018175	NM_000546	TP53
QG084-01	A04	HQP018064	NM_000360	TH
QG084-01	A05	HQP018061	NM_004613	TGM2
QG084-01	A06	HQP017740	NM_006280	SSR4
QG084-01	A07	HQP017615	NM_000454	SOD1
QG084-01	A08	HQP023002	NM_005460	SNCAIP
QG084-01	A09	HQP017582	NM_000345	SNCA
QG084-01	A10	HQP017318	NM_004171	SLC1A2
QG084-01	A11	HQP016125	NM_002890	RASA1
QG084-01	A12	HQP014773	NM_172341	PSENEN
QG084-01	B01	HQP015123	NM_000021	PSEN1
QG084-01	B02	HQP015032	NM_000311	PRNP
QG084-01	B03	HQP014309	NM_000944	PPP3CA
QG084-01	B04	HQP020918	NM_032639	PLEKHA8
QG084-01	B05	HQP001549	NM_007262	PARK7
QG084-01	B06	HQP012193	NM_004562	PARK2
QG084-01	B07	HQP011800	NM_006164	NFE2L2
QG084-01	B08	HQP011751	NM_005382	NEFM
QG084-01	B09	HQP011761	NM_006158	NEFL
QG084-01	B10	HQP011759	NM_021076	NEFH
QG084-01	B11	HQP006054	NM_015331	NCSTN
QG084-01	B12	HQP022978	NM_006311	NCOR1
QG084-01	C01	HQP011254	NM_000902	MME
QG084-01	C02	HQP022342	NM_001033057	MAGI1
QG084-01	C03	HQP010870	NM_002332	LRP1
QG084-01	C04	HQP010847	NM_000237	LPL
QG084-01	C05	HQP010527	NM_002291	LAMB1
QG084-01	C06	HQP008000	NM_005559	LAMA1
QG084-01	C07	HQP009863	NM_005548	KARS
QG084-01	C08	HQP020315	NM_031483	ITCH
QG084-01	C09	HQP009764	NM_000208	INSR
QG084-01	C10	HQP009749	NM_000207	INS
QG084-01	C11	HQP014035	NM_018010	IFT57
QG084-01	C12	HQP009098	NM_002156	HSPD1
QG084-01	D01	HQP009083	NM_005347	HSPA5
QG084-01	D02	HQP008834	NM_005339	HIP2
QG084-01	D03	HQP008833	NM_005338	HIP1

QG084-01	D04	HQP000022	NM_006044	HDAC6
QG084-01	D05	HQP008744	NM_002111	HD
QG084-01	D06	HQP008469	NM_002093	GSK3B
QG084-01	D07	HQP008291	NM_002086	GRB2
QG084-01	D08	HQP008279	NM_000581	GPX1
QG084-01	D09	HQP008221	NM_005302	GPR37
QG084-01	D10	HQP007360	NM_002055	GFAP
QG084-01	D11	HQP006940	NM_002046	GAPDH
QG084-01	D12	HQP004096	NM_004082	DCTN1
QG084-01	E01	HQP002920	NM_001079846	CREBBP
QG084-01	E02	HQP002128	NM_004859	CLTC
QG084-01	E03	HQP021518	NM_000071	CBS
QG084-01	E04	HQP018966	NM_001080124	CASP8
QG084-01	E05	HQP020427	NM_001226	CASP6
QG084-01	E06	HQP020297	NM_004346	CASP3
QG084-01	E07	HQP020207	NM_001223	CASP1
QG084-01	E08	HQP013039	NM_017422	CALML5
QG084-01	E09	HQP019811	NM_005184	CALM3
QG084-01	E10	HQP019707	NM_001743	CALM2
QG084-01	E11	HQP019580	NM_006888	CALM1
QG084-01	E12	HQP016237	NM_001191	BCL2L1
QG084-01	F01	HQP016211	NM_000633	BCL2
QG084-01	F02	HQP015964	NM_004324	BAX
QG084-01	F03	HQP000549	NM_006340	BAIAP2
QG084-01	F04	HQP015538	NM_004322	BAD
QG084-01	F05	HQP006760	NM_012105	BACE2
QG084-01	F06	HQP006277	NM_012104	BACE1
QG084-01	F07	HQP004456	NM_001007026	ATN1
QG084-01	F08	HQP021666	NM_001018159	APPBP1
QG084-01	F09	HQP009578	NM_000484	APP
QG084-01	F10	HQP009556	NM_000041	APOE
QG084-01	F11	HQP012404	NM_001077628	APH1A
QG084-01	F12	HQP009007	NM_001164	APBB1
QG084-01	G01	HQP015797	NM_020919	ALS2
QG084-01	G02	HQP008678	NM_000014	A2M
QG084-01	G03	HQP013394	NM_002688	SEPT5
QG084-01	G04	HQP011748	NM_001042681	RERE
QG084-01	G05	HQP016545	NM_001709	BDNF
QG084-01	G06	HQP020946	NM_001752	CAT
QG084-01	G07	HQP010543	NM_001012321	RPSA
QG084-01	G08	HQP018375	NM_003343	UBE2G2

QG084-01	G09	HQP021847	NM_001079870	HAP1
QG084-01	G10	HQP009349	NM_004969	IDE
QG084-01	G11	HQP010532	NM_002293	LAMC1
QG084-01	G12	HQP011022	NM_005910	MAPT
QG084-01	H01	HGDC		
QG084-01	H02	HGDC		
QG084-01	H03	HQP006940	NM_002046	GAPDH
QG084-01	H04	HQP016381	NM_001101	ACTB
QG084-01	H05	HQP015171	NM_004048	B2M
QG084-01	H06	HQP006171	NM_012423	RPL13A
QG084-01	H07	HQP009026	NM_000194	HPRT1
QG084-01	H08	HQP054253	NR_003286	RN18S1
QG084-01	H09	RT		
QG084-01	H10	RT		
QG084-01	H11	PCR		
QG084-01	H12	PCR		

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