RT² Profiler PCR Array (96-Well Format and 384-Well [4 x 96] Format)

Human Lymphoma

Cat. no. 330231 PAHS-139ZA

For pathway expression analysis

Format	For use with the following real-time cyclers
RT² Profiler PCR Array, Format A	Applied Biosystems® models 5700, 7000, 7300, 7500, 7700, 7900HT, ViiA™ 7 (96-well block); Bio-Rad® models iCycler®, iQ™5, MyiQ™, MyiQ2; Bio-Rad/MJ Research Chromo4™; Eppendorf® Mastercycler® ep realplex models 2, 2s, 4, 4s; Stratagene® models Mx3005P®, Mx3000P®; Takara TP-800
RT² Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT² Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
RT² Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT² Profiler PCR Array, Format F	Roche® LightCycler® 480 (96-well block)
RT² Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT² Profiler PCR Array, Format H	Fluidigm® BioMark™

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Description

The Human Lymphoma RT² Profiler PCR Array profiles the expression of 84 key genes commonly involved in lymphoma development, classification, prognosis, and therapeutic response. Lymphoma is a cancer of lymphatic cells in the immune system. The major clinical and pathological subtypes of adulthood lymphoma include follicular lymphoma and diffuse large B-cell lymphoma (DLBCL). Lymphoma affects molecular and biological pathways responsible for cell adhesion, cell cycle, immune and inflammatory responses, PI-3-Kinase/AKT signaling, and T cell differentiation. This array represents many genes in these pathways as well as a number of common lymphoma therapeutic targets derived from the same pathways. The array also includes dysregulated genes detected routinely in molecular analysis of lymphoma samples and in high-throughput microarray profiling studies, especially those associated with lymphoma survival. Genes known to have differentially methylated promoters in lymphoma are also represented. The profiling results from this array may lead to a better understanding of the molecular mechanisms behind lymphoma. Using real-time PCR, research studies can easily and reliably analyze the expression of a focused panel of genes involved in lymphoma initiation and progression with this array.

For further details, consult the *RT² Profiler PCR Array Handbook*.

Shipping and storage

RT² Profiler PCR Arrays in formats A, C, D, E, F, and G are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products. RT² Profiler PCR Arrays in format H are shipped on dry ice or blue ice packs.

For long term storage, keep plates at –20°C.

Note: Ensure that you have the correct RT² Profiler PCR Array format for your real-time cycler (see table above).

Note: Open the package and store the products appropriately immediately on receipt.

Array layout (96-well)

For 384-well 4 x 96 PCR arrays, genes are present in a staggered format. Refer to the *RT² Profiler PCR Array Handbook* for layout.

	1	2	3	4	5	6	7	8	9	10	11	12
A	AFF1	ALK	ASB13	ATM	BCL2	BCL6	BIRC5	BTK	C1QA	CADM1	CCND1	CCR1
B	CD2	CD22	CD34	CD3D	CD4	CD40	CD40LG	CD47	CD5	CD79A	CD80	CD8A
C	CDH1	CDH13	CDKN1C	CDKN2B	CDKN2C	CSF3	CXCR4	DAPK1	DLC1	DNTT	F8	FCER2
D	FCGR1A	FHIT	FLT3LG	GSTP1	HIC1	HRK	HSP90AA1	ID4	IFNG	IL2	IL6	ITPKB
E	LMO2	LRMP	LRP1B	MCL1	MKI67	MLH1	MME	MS4A1	MTOR	MYBL1	MYC	MYOD1
F	NCAM1	NFKB1	NOTCH1	PAG1	PARP1	PDLIM7	PTK2	PTPRC	RASSF1	RBP1	SLC19A1	SRC
G	STAT4	SYK	TGFB1	TIMP2	TIMP3	TLR5	TNF	TNFRSF1B	TNFSF13B	TP53	TTC9	VGLL4
H	ACTB	B2M	GAPDH	HPRT1	RPLP0	HGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Hs.480190	NM_005935	AFF1	AF4/FMR2 family, member 1
A02	Hs.654469	NM_004304	ALK	Anaplastic lymphoma receptor tyrosine kinase
A03	Hs.445899	NM_024701	ASB13	Ankyrin repeat and SOCS box containing 13
A04	Hs.367437	NM_000051	ATM	Ataxia telangiectasia mutated
A05	Hs.150749	NM_000633	BCL2	B-cell CLL/lymphoma 2
A06	Hs.478588	NM_001706	BCL6	B-cell CLL/lymphoma 6
A07	Hs.728893	NM_001168	BIRC5	Baculoviral IAP repeat containing 5
A08	Hs.159494	NM_000061	BTK	Bruton agammaglobulinemia tyrosine kinase
A09	Hs.632379	NM_015991	C1QA	Complement component 1, q subcomponent, A chain
A10	Hs.370510	NM_014333	CADM1	Cell adhesion molecule 1
A11	Hs.523852	NM_053056	CCND1	Cyclin D1
A12	Hs.301921	NM_001295	CCR1	Chemokine (C-C motif) receptor 1
B01	Hs.523500	NM_001767	CD2	CD2 molecule
B02	Hs.579691	NM_001771	CD22	CD22 molecule
B03	Hs.374990	NM_001773	CD34	CD34 molecule
B04	Hs.504048	NM_000732	CD3D	CD3d molecule, delta (CD3-TCR complex)
B05	Hs.631659	NM_000616	CD4	CD4 molecule
B06	Hs.472860	NM_001250	CD40	CD40 molecule, TNF receptor superfamily member 5
B07	Hs.592244	NM_000074	CD40LG	CD40 ligand
B08	Hs.446414	NM_001777	CD47	CD47 molecule
B09	Hs.58685	NM_014207	CD5	CD5 molecule
B10	Hs.631567	NM_001783	CD79A	CD79a molecule, immunoglobulin-associated alpha
B11	Hs.838	NM_005191	CD80	CD80 molecule
B12	Hs.85258	NM_001768	CD8A	CD8a molecule
C01	Hs.461086	NM_004360	CDH1	Cadherin 1, type 1, E-cadherin (epithelial)
C02	Hs.654386	NM_001257	CDH13	Cadherin 13, H-cadherin (heart)
C03	Hs.106070	NM_000076	CDKN1C	Cyclin-dependent kinase inhibitor 1C (p57, Kip2)
C04	Hs.72901	NM_004936	CDKN2B	Cyclin-dependent kinase inhibitor 2B (p15, inhibits CDK4)
C05	Hs.728783	NM_078626	CDKN2C	Cyclin-dependent kinase inhibitor 2C (p18, inhibits CDK4)
C06	Hs.2233	NM_000759	CSF3	Colony stimulating factor 3 (granulocyte)
C07	Hs.593413	NM_003467	CXCR4	Chemokine (C-X-C motif) receptor 4
C08	Hs.380277	NM_004938	DAPK1	Death-associated protein kinase 1
C09	Hs.134296	NM_006094	DLC1	Deleted in liver cancer 1
C10	Hs.534206	NM_004088	DNTT	Deoxynucleotidyltransferase, terminal
C11	Hs.654450	NM_000132	F8	Coagulation factor VIII, procoagulant component
C12	Hs.465778	NM_002002	FCER2	Fc fragment of IgE, low affinity II, receptor for (CD23)
D01	Hs.77424	NM_000566	FCGR1A	Fc fragment of IgG, high affinity Ia, receptor (CD64)
D02	Hs.715588	NM_002012	FHIT	Fragile histidine triad gene
D03	Hs.428	NM_001459	FLT3LG	Fms-related tyrosine kinase 3 ligand
D04	Hs.523836	NM_000852	GSTP1	Glutathione S-transferase pi 1
D05	Hs.72956	NM_006497	HIC1	Hypermethylated in cancer 1
D06	Hs.87247	NM_003806	HRK	Harakiri, BCL2 interacting protein (contains only BH3 domain)
D07	Hs.525600	NM_001017963	HSP90AA1	Heat shock protein 90kDa alpha (cytosolic), class A member 1
D08	Hs.519601	NM_001546	ID4	Inhibitor of DNA binding 4, dominant negative helix-loop-helix protein
D09	Hs.856	NM_000619	IFNG	Interferon, gamma

Position	UniGene	GenBank	Symbol	Description
D10	Hs.89679	NM_000586	IL2	Interleukin 2
D11	Hs.654458	NM_000600	IL6	Interleukin 6 (interferon, beta 2)
D12	Hs.528087	NM_002221	ITPKB	Inositol-trisphosphate 3-kinase B
E01	Hs.34560	NM_005574	LMO2	LIM domain only 2 (rhombotin-like 1)
E02	Hs.124922	NM_006152	LRMP	Lymphoid-restricted membrane protein
E03	Hs.656461	NM_018557	LRP1B	Low density lipoprotein receptor-related protein 1B
E04	Hs.632486	NM_021960	MCL1	Myeloid cell leukemia sequence 1 (BCL2-related)
E05	Hs.689823	NM_002417	MKI67	Antigen identified by monoclonal antibody Ki-67
E06	Hs.195364	NM_000249	MLH1	MutL homolog 1, colon cancer, nonpolyposis type 2 (E. coli)
E07	Hs.307734	NM_000902	MME	Membrane metallo-endopeptidase
E08	Hs.712553	NM_021950	MS4A1	Membrane-spanning 4-domains, subfamily A, member 1
E09	Hs.338207	NM_004958	MTOR	Mechanistic target of rapamycin (serine/threonine kinase)
E10	Hs.445898	NM_001080416	MYBL1	V-myb myeloblastosis viral oncogene homolog (avian)-like 1
E11	Hs.202453	NM_002467	MYC	V-myc myelocytomatosis viral oncogene homolog (avian)
E12	Hs.181768	NM_002478	MYOD1	Myogenic differentiation 1
F01	Hs.503878	NM_000615	NCAM1	Neural cell adhesion molecule 1
F02	Hs.654408	NM_003998	NFKB1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
F03	Hs.495473	NM_017617	NOTCH1	Notch 1
F04	Hs.266175	NM_018440	PAG1	Phosphoprotein associated with glycosphingolipid microdomains 1
F05	Hs.177766	NM_001618	PARP1	Poly (ADP-ribose) polymerase 1
F06	Hs.533040	NM_005451	PDLIM7	PDZ and LIM domain 7 (enigma)
F07	Hs.395482	NM_005607	PTK2	PTK2 protein tyrosine kinase 2
F08	Hs.654514	NM_002838	PTPRC	Protein tyrosine phosphatase, receptor type, C
F09	Hs.476270	NM_007182	RASSF1	Ras association (RalGDS/AF-6) domain family member 1
F10	Hs.529571	NM_002899	RBP1	Retinol binding protein 1, cellular
F11	Hs.84190	NM_194255	SLC19A1	Solute carrier family 19 (folate transporter), member 1
F12	Hs.195659	NM_005417	SRC	V-src sarcoma (Schmidt-Ruppin A-2) viral oncogene homolog (avian)
G01	Hs.80642	NM_003151	STAT4	Signal transducer and activator of transcription 4
G02	Hs.371720	NM_003177	SYK	Spleen tyrosine kinase
G03	Hs.645227	NM_000660	TGFB1	Transforming growth factor, beta 1
G04	Hs.633514	NM_003255	TIMP2	TIMP metallopeptidase inhibitor 2
G05	Hs.644633	NM_000362	TIMP3	TIMP metallopeptidase inhibitor 3
G06	Hs.604542	NM_003268	TLR5	Toll-like receptor 5
G07	Hs.241570	NM_000594	TNF	Tumor necrosis factor
G08	Hs.256278	NM_001066	TNFRSF1B	Tumor necrosis factor receptor superfamily, member 1B
G09	Hs.525157	NM_006573	TNFSF13B	Tumor necrosis factor (ligand) superfamily, member 13b
G10	Hs.654481	NM_000546	TP53	Tumor protein p53
G11	Hs.79170	NM_015351	TTC9	Tetratricopeptide repeat domain 9
G12	Hs.38032	NM_014667	VGLL4	Vestigial like 4 (Drosophila)
H01	Hs.520640	NM_001101	ACTB	Actin, beta
H02	Hs.534255	NM_004048	B2M	Beta-2-microglobulin
H03	Hs.592355	NM_002046	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
H04	Hs.412707	NM_000194	HPRT1	Hypoxanthine phosphoribosyltransferase 1
H05	Hs.546285	NM_001002	RPLP0	Ribosomal protein, large, P0
H06	N/A	SA_00105	HGDC	Human Genomic DNA Contamination
H07	N/A	SA_00104	RTC	Reverse Transcription Control
H08	N/A	SA_00104	RTC	Reverse Transcription Control
H09	N/A	SA_00104	RTC	Reverse Transcription Control
H10	N/A	SA_00103	PPC	Positive PCR Control
H11	N/A	SA_00103	PPC	Positive PCR Control
H12	N/A	SA_00103	PPC	Positive PCR Control

Related products

For optimal performance, RT² Profiler PCR Arrays should be used together with the RT² First Strand Kit for cDNA synthesis and RT2 SYBR® Green qPCR Mastermixes for PCR.

Product	Contents	Cat. no.
RT² First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT² SYBR Green qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with real-time cyclers that do not require a reference dye, including: Bio-Rad models CFX96, CFX384, DNA Engine Opticon 2; Bio-Rad/MJ Research Chromo4; Roche LightCycler 480 (96-well and 384-well); all other cyclers	330500
RT² SYBR Green ROX™ qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the following real-time cyclers: Applied Biosystems models 5700, 7000, 7300, 7500 [Standard and FAST], 7700, 7900HT 96-well block [Standard and FAST] and 384-well block, StepOnePlus; Eppendorf Mastercycler ep realplex models 2, 2S, 4, 4S; Stratagene models Mx3000P, Mx3005P, Mx4000; Takara TP-800	330520
RT² SYBR Green Fluor qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the following real-time cyclers: Bio-Rad models iCycler, iQ5, MyiQ, MyiQ2	330510

* Larger kit sizes available; please inquire.

RT² Profiler PCR Array products are intended for molecular biology applications. These products are not intended for the diagnosis, prevention, or treatment of a disease.

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at www.qiagen.com or can be requested from QIAGEN Technical Services or your local distributor.

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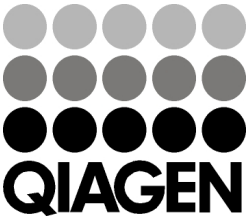

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