RT² Profiler PCR Array (Rotor-Gene® Format)

Rat Crohn's Disease

Cat. no. 330231 PARN-169ZR

For pathway expression analysis

Format	For use with the following real-time cyclers
RT² Profiler PCR Array, Format R	Rotor-Gene Q, other Rotor-Gene cyclers

Description

The Rat Crohn's Disease RT² Profiler PCR Array profiles the expression of 84 key genes differentially expressed during inflammatory bowel disease (IBD). The most common form of IBD is Crohn's disease, an inflammatory disorder of the intestines. Ulcerative colitis (UC), another common form of IBD, only affects the mucosa of the large intestine. The major symptoms of IBD include abdominal pain, vomiting, and diarrhea. The disease can result in weight loss, and during severe cases the patient may undergo complications such as decreased intestinal function and ultimately colectomy. Although the initial cause of IBD is not generally understood, the resulting biology is under investigation to research potential therapies as well as biomarkers for the various types of IBD. One major therapeutic goal is to reduce IBD symptoms and inflammation, since the symptomatic diseases have an increased risk of colorectal cancer. Inflammatory cytokines are upregulated, as are extracellular remodeling enzymes. The immune response is also upregulated, including innate immunity and T cell responses. Microarray studies have compared both Crohn's disease and UC to controls and each other to attempt to identify the underlying causes. This array includes genes identified via microarray to be differentially regulated during Crohn's disease and UC. A set of controls present on each array enables data analysis using the ΔΔCT method of relative quantification, assessment of reverse transcription performance, genomic DNA contamination, and PCR performance. Using real-time PCR, research studies can easily and reliably analyze the expression of a focused panel of genes involved in inflammatory bowel disease with this array.

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

Shipping and storage

RT² Profiler PCR Arrays in the Rotor-Gene format are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products.

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

The 96 real-time assays in the Rotor-Gene format are located in wells 1–96 of the Rotor-Disc™ (plate A1–A12=Rotor-Disc 1–12, plate B1–B12=Rotor-Disc 13–24, etc.). To maintain data analysis compatibility, wells 97–100 do not contain real-time assays but will contain master mix to account for weight balance.

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Rn.154810	NM_133401	Abcb1a	ATP-binding cassette, sub-family B (MDR/TAP), member 1A
A02	Rn.98207	NM_012496	Aldob	Aldolase B, fructose-bisphosphate
A03	Rn.101734	NM_001108809	Atg16l1	ATG16 autophagy related 16-like 1 (S. cerevisiae)
A04	Rn.11378	NM_016994	C3	Complement component 3
A05	Rn.11151	NM_016995	C4bpb	Complement component 4 binding protein, beta
A06	Rn.37508	NM_012762	Casp1	Caspase 1
A07	Rn.10632	NM_019205	Ccl11	Chemokine (C-C motif) ligand 11
A08	Rn.137780	NM_001105822	Ccl12	Chemokine (C-C motif) ligand 12
A09	Rn.10722	NM_019233	Ccl20	Chemokine (C-C motif) ligand 20
A10	Rn.140677	NM_001037203	Ccl25	Chemokine (C-C motif) ligand 25
A11	Rn.8019	NM_031116	Ccl5	Chemokine (C-C motif) ligand 5
A12	Rn.34673	NM_020542	Ccr1	Chemokine (C-C motif) receptor 1
B01	Rn.211983	NM_021866	Ccr2	Chemokine (C-C motif) receptor 2
B02	Rn.10736	NM_053960	Ccr5	Chemokine (C-C motif) receptor 5
B03	Rn.91140	NM_172329	Ccr9	Chemokine (C-C motif) receptor 9
B04	Rn.18841	NM_022269	Cd55	Cd55 molecule
B05	Rn.68940	NM_053560	Chi3l1	Chitinase 3-like 1
B06	Rn.79297	NM_001037774	Cldn8	Claudin 8
B07	Rn.107239	NM_053356	Col1a2	Collagen, type I, alpha 2
B08	Rn.23490	NM_001105989	Cr2	Complement receptor 2
B09	Rn.23703	NM_001105876	Csta	Cystatin A (stefin A)
B10	Rn.107266	NM_134455	Cx3cl1	Chemokine (C-X3-C motif) ligand 1
B11	Rn.10482	NM_133534	Cx3cr1	Chemokine (C-X3-C motif) receptor 1
B12	Rn.10907	NM_030845	Cxcl1	Chemokine (C-X-C motif) ligand 1 (melanoma growth stimulating activity, alpha)
C01	Rn.10584	NM_139089	Cxcl10	Chemokine (C-X-C motif) ligand 10
C02	Rn.13664	NM_182952	Cxcl11	Chemokine (C-X-C motif) ligand 11
C03	Rn.54439	NM_022177	Cxcl12	Chemokine (C-X-C motif) ligand 12 (stromal cell-derived factor 1)
C04	Rn.10230	NM_053647	Cxcl2	Chemokine (C-X-C motif) ligand 2
C05	Rn.10525	NM_138522	Cxcl3	Chemokine (C-X-C motif) ligand 3
C06	Rn.7391	NM_145672	Cxcl9	Chemokine (C-X-C motif) ligand 9
C07	Rn.24787	NM_053415	Cxcr3	Chemokine (C-X-C motif) receptor 3
C08	Rn.219070	NM_001033076	Defa6	Defensin alpha 6
C09	N/A	NM_001077650	Edn3	Endothelin 3
C10	Rn.44371	NM_017086	Egr3	Early growth response 3
C11	Rn.218643	NM_001106216	Fpr1	Formyl peptide receptor 1
C12	Rn.54383	NM_012707	Gcg	Glucagon
D01	Rn.101146	NM_001012197	Hsp90b1	Heat shock protein 90, beta, member 1
D02	Rn.11088	NM_013083	Hspa5	Heat shock protein 5
D03	Rn.10795	NM_138880	Ifng	Interferon gamma
D04	Rn.9921	NM_053828	Il13	Interleukin 13
D05	Rn.218513	NM_001106897	Il17a	Interleukin 17A
D06	Rn.9869	NM_031512	Il1b	Interleukin 1 beta
D07	Rn.162640	NM_022194	Il1rn	Interleukin 1 receptor antagonist
D08	Rn.81073	NM_130410	Il23a	Interleukin 23, alpha subunit p19
D09	Rn.9872	NM_013163	Il2ra	Interleukin 2 receptor, alpha
D10	Rn.44227	NM_021834	Il5	Interleukin 5
D11	Rn.9873	NM_012589	Il6	Interleukin 6
D12	Rn.138115	NM_019310	Il8ra	Interleukin 8 receptor, alpha
E01	Rn.203787	NM_001106586	Irf5	Interferon regulatory factor 5
E02	Rn.198318	NM_001106700	Isg15	ISG15 ubiquitin-like modifier
E03	Rn.42962	NM_001037780	Itgb2	Integrin, beta 2
E04	Rn.11303	NM_130741	Lcn2	Lipocalin 2
E05	Rn.203016	NM_212507	Ltb	Lymphotoxin beta (TNF superfamily, member 3)
E06	Rn.2283	NM_012771	Lyz2	Lysozyme 2
E07	Rn.9946	NM_133514	Mmp10	Matrix metallopeptidase 10
E08	Rn.33193	NM_053963	Mmp12	Matrix metallopeptidase 12
E09	Rn.79007	NM_001134530	Mmp1a	Matrix metallopeptidase 1a (interstitial collagenase)

Position	UniGene	GenBank	Symbol	Description
E10	Rn.32086	NM_133523	Mmp3	Matrix metallopeptidase 3
E11	Rn.10282	NM_012864	Mmp7	Matrix metallopeptidase 7
E12	Rn.10779	NM_012602	Muc1	Mucin 1, cell surface associated
F01	Rn.218600	NM_001106172	Nod2	Nucleotide-binding oligomerization domain containing 2
F02	Rn.10400	NM_012611	Nos2	Nitric oxide synthase 2, inducible
F03	Rn.9678	NM_013131	Nr3c2	Nuclear receptor subfamily 3, group C, member 2
F04	Rn.104376	NM_198780	Pck1	Phosphoenolpyruvate carboxykinase 1 (soluble)
F05	Rn.1878	NM_031591	Pecam1	Platelet/endothelial cell adhesion molecule 1
F06	Rn.11332	NM_012641	Reg1a	Regenerating islet-derived 1 alpha
F07	Rn.25717	NM_001008831	RT1-Ba	RT1 class II, locus Ba
F08	Rn.103146	NM_001008847	RT1-Da	RT1 class II, locus Da
F09	Rn.33311	NM_001008884	RT1-Db1	RT1 class II, locus Db1
F10	Rn.31839	NM_053822	S100a8	S100 calcium binding protein A8
F11	Rn.6703	NM_053587	S100a9	S100 calcium binding protein A9
F12	Rn.10359	NM_138879	Sele	Selectin E
G01	Rn.10461	NM_019177	Sell	Selectin L
G02	Rn.25752	NM_057108	Serpinb5	Serpin peptidase inhibitor, clade B (ovalbumin), member 5
G03	Rn.10488	NM_017051	Sod2	Superoxide dismutase 2, mitochondrial
G04	Rn.33229	NM_032612	Stat1	Signal transducer and activator of transcription 1
G05	Rn.10247	NM_012747	Stat3	Signal transducer and activator of transcription 3
G06	Rn.1029	NM_022403	Tdo2	Tryptophan 2,3-dioxygenase
G07	Rn.10715	NM_057129	Tff1	Trefoil factor 1
G08	Rn.25754	NM_053819	Timp1	TIMP metallopeptidase inhibitor 1
G09	Rn.2275	NM_012675	Tnf	Tumor necrosis factor (TNF superfamily, member 2)
G10	Rn.140313	XM_233741	Tyk2	Tyrosine kinase 2
G11	Rn.18473	NM_053299	Ubd	Ubiquitin D
G12	Rn.35561	XM_342759	Vwf	Von Willebrand factor
H01	Rn.94978	NM_031144	Actb	Actin, beta
H02	Rn.1868	NM_012512	B2m	Beta-2 microglobulin
H03	Rn.47	NM_012583	Hprt1	Hypoxanthine phosphoribosyltransferase 1
H04	Rn.107896	NM_017025	Ldha	Lactate dehydrogenase A
H05	Rn.973	NM_001007604	Rplp1	Ribosomal protein, large, P1
H06	N/A	U26919	RGDC	Rat 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 ROX™ FAST Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the Rotor-Gene Q and other Rotor-Gene cyclers	330620

* 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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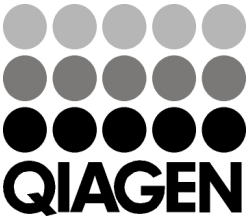

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