

# QuantiNova® LNA® PCR Focus Panels (96-Well Format and 384-Well [4 x 96] Format)

## Human PPAR Targets

Cat. no. 249950 SBHS-149ZA

For study focus gene expression analysis

### Shipping and storage

QuantiNova LNA PCR Focus Panels are shipped at ambient temperature. Immediately upon receipt, they should be stored at 2–8°C for short term storage or at –30°C to –15°C for long time storage. Under these conditions, all components are stable for at least 12 months.

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

For optimal performance, QuantiNova LNA PCR Focus Panels should be used together with the QuantiNova Reverse Transcription Kit for cDNA synthesis and the QuantiNova SYBR® Green PCR Kit (Mastermix) for PCR.

### Panel layout (96-well): QuantiNova LNA PCR Focus Panel

For the 384-well (4 × 96) PCR panels, genes are present in a staggered format. Refer to the QuantiNova LNA PCR System Handbook at [www.qiagen.com](http://www.qiagen.com) for further details.

	1	2	3	4	5	6	7	8	9	10	11	12
A	ACAA2	ACADL	ACADM	ACOX1	ACOX3	ACSL1	ACSL3	ACSL4	ACSL5	ADIPOQ	ANGPTL4	APOA1
B	APOA5	APOC3	APOE	CD36	CHD9	CLU	CPT1A	CPT1B	CPT2	CREB1	CREBBP	CYP27A1
C	CYP4A11	CYP7A1	DGAT1	ECH1	EHHADH	ELN	EP300	ETFDH	FABP1	FABP2	FABP3	FABP4
D	FABP5	FABP6	FABP7	FADS2	FGR	GK	HIF1A	HMGCS2	ILK	KLF10	LPIN1	LPL
E	MED1	MLYCD	MMP9	NCOA3	NCOA6	NR1H3	OLR1	PCK1	PCK2	PDPK1	PLTP	PPARA
F	PPARD	PPARG	PPARGC1A	PPARGC1B	PPRC1	HELZ2	PTEN	RXRA	RXRB	RXRG	SCD	SIRT1
G	SLC22A5	SLC27A1	SLC27A2	SLC27A4	SLC27A5	SLC27A6	SMARCD3	SORBS1	SRC	TGS1	TXNIP	UCP1
H	ACTB	B2M	GAPDH	HPRT1	RPLP0	HGDC	QIC	QIC	QIC	PPC	PPC	PPC

## Gene table: QuantiNova LNA PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	SBH0372581	ENST00000285093.15	ACAA2	ENSG00000167315	acetyl-CoA acyltransferase 2 Source HGNC Symbol Acc HGNC 83
A02	SBH0609590	ENST00000482502.1	ACADL	ENSG00000115361	acyl-CoA dehydrogenase long chain Source HGNC Symbol Acc HGNC 88
A03	SBH0112462	ENST00000370841.8	ACADM	ENSG00000117054	acyl-CoA dehydrogenase medium chain Source HGNC Symbol Acc HGNC 89
A04	SBH0169326	ENST00000293217.10	ACOX1	ENSG00000161533	acyl-CoA oxidase 1 Source HGNC Symbol Acc HGNC 119
A05	SBH0102149	ENST00000356406.10	ACOX3	ENSG00000087008	acyl-CoA oxidase 3, pristanoyl Source HGNC Symbol Acc HGNC 121
A06	SBH0588811	ENST00000505492.1	ACSL1	ENSG00000151726	acyl-CoA synthetase long chain family member 1 Source HGNC Symbol Acc HGNC 3569
A07	SBH1219721	ENST00000413316.1	ACSL3	ENSG00000123983	acyl-CoA synthetase long chain family member 3 Source HGNC Symbol Acc HGNC 3570
A08	SBH0030689	ENST00000348502.10	ACSL4	ENSG00000068366	acyl-CoA synthetase long chain family member 4 Source HGNC Symbol Acc HGNC 3571
A09	SBH0217698	ENST00000356116.5	ACSL5	ENSG00000197142	acyl-CoA synthetase long chain family member 5 Source HGNC Symbol Acc HGNC 16526
A10	SBH1219727	ENST00000320741.7	ADIPOQ	ENSG00000181092	adiponectin, C1Q and collagen domain containing Source HGNC Symbol Acc HGNC 13633
A11	SBH0321217	ENST00000393962.6	ANGPTL4	ENSG00000167772	angiotensinogen like 4 Source HGNC Symbol Acc HGNC 16039
A12	SBH0583640	ENST00000375320.5	APOA1	ENSG00000118137	apolipoprotein A1 Source HGNC Symbol Acc HGNC 600
B01	SBH0391653	ENST00000227665.8	APOA5	ENSG00000110243	apolipoprotein A5 Source HGNC Symbol Acc HGNC 17288
B02	SBH0457302	ENST00000375345.3	APOC3	ENSG00000110245	apolipoprotein C3 Source HGNC Symbol Acc HGNC 610
B03	SBH0562930	ENST00000434152.5	APOE	ENSG00000130203	apolipoprotein E Source HGNC Symbol Acc HGNC 613
B04	SBH0074710	ENST00000441109.6	CD36	ENSG00000135218	CD36 molecule Source HGNC Symbol Acc HGNC 1663
B05	SBH0272366	ENST00000565119.1	CHD9	ENSG00000177200	chromodomain helicase DNA binding protein 9 Source HGNC Symbol Acc HGNC 25701
B06	SBH0298251	ENST00000523500.5	CLU	ENSG00000120885	clusterin Source HGNC Symbol Acc HGNC 2095
B07	SBH0531896	ENST00000539743.5	CPT1A	ENSG00000110090	carnitine palmitoyltransferase 1A Source HGNC Symbol Acc HGNC 2328
B08	SBH0574504	ENST00000312108.11	CPT1B	ENSG00000205560	carnitine palmitoyltransferase 1B Source HGNC Symbol Acc HGNC 2329
B09	SBH1219910	ENST00000636891.1	CPT2	ENSG00000157184	carnitine palmitoyltransferase 2 Source HGNC Symbol Acc HGNC 2330
B10	SBH0077258	ENST00000353267.8	CREB1	ENSG00000118260	cAMP responsive element binding protein 1 Source HGNC Symbol Acc HGNC 2345
B11	SBH0411189	ENST00000571826.5	CREBBP	ENSG00000005339	CREB binding protein Source HGNC Symbol Acc HGNC 2348
B12	SBH0498697	ENST00000411688.1	CYP27A1	ENSG00000135929	cytochrome P450 family 27 subfamily A member 1 Source HGNC Symbol Acc HGNC 2605
C01	SBH0004621	ENST00000462347.5	CYP4A11	ENSG00000187048	cytochrome P450 family 4 subfamily A member 11 Source HGNC Symbol Acc HGNC 2642
C02	SBH0038066	ENST00000301645.4	CYP7A1	ENSG00000167910	cytochrome P450 family 7 subfamily A member 1 Source HGNC Symbol Acc HGNC 2651
C03	SBH0001845	ENST00000332324.5	DGAT1	ENSG00000185000	diacylglycerol O-acyltransferase 1 Source HGNC Symbol Acc HGNC 2843
C04	SBH0531843	ENST00000598316.5	ECH1	ENSG00000104823	enoyl-CoA hydratase 1 Source HGNC Symbol Acc HGNC 3149
C05	SBH0116631	ENST00000456310.5	EHHADH	ENSG00000113790	enoyl-CoA hydratase and 3-hydroxyacyl CoA dehydrogenase Source HGNC Symbol Acc HGNC 3247
C06	SBH0073042	ENST00000431562.5	ELN	ENSG00000049540	elastin Source HGNC Symbol Acc HGNC 3327
C07	SBH1219977	ENST00000263253.9	EP300	ENSG00000100393	E1A binding protein p300 Source HGNC Symbol Acc HGNC 3373
C08	SBH0378307	ENST00000506422.1	ETFDH	ENSG00000171503	electron transfer flavoprotein dehydrogenase Source HGNC Symbol Acc HGNC 3483
C09	SBH1219991	ENST00000393750.3	FABP1	ENSG00000163586	fatty acid binding protein 1 Source HGNC Symbol Acc HGNC 3555
C10	SBH0295583	ENST00000274024.3	FABP2	ENSG00000145384	fatty acid binding protein 2 Source HGNC Symbol Acc HGNC 3556
		ENST00000373		ENSG000000	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBH0060313	713.6	FABP3	121769	fatty acid binding protein 3 Source HGNC Symbol Acc HGNC 3557
C12	SBH0327090	ENST00000521734.1	FABP4	ENSG00000170323	fatty acid binding protein 4 Source HGNC Symbol Acc HGNC 3559
D01	SBH0233621	ENST00000396359.1	FABP5	ENSG00000164687	fatty acid binding protein 5 Source HGNC Symbol Acc HGNC 3560
D02	SBH0386907	ENST00000393980.8	FABP6	ENSG00000170231	fatty acid binding protein 6 Source HGNC Symbol Acc HGNC 3561
D03	SBH0346793	ENST00000368444.8	FABP7	ENSG00000164434	fatty acid binding protein 7 Source HGNC Symbol Acc HGNC 3562
D04	SBH0282143	ENST00000521849.5	FADS2	ENSG00000134824	fatty acid desaturase 2 Source HGNC Symbol Acc HGNC 3575
D05	SBH0170113	ENST00000374005.8	FGR	ENSG00000000938	FGR proto-oncogene, Src family tyrosine kinase Source HGNC Symbol Acc HGNC 3697
D06	SBH0594548	ENST00000378946.7	GK	ENSG00000198814	glycerol kinase Source HGNC Symbol Acc HGNC 4289
D07	SBH1220060	ENST00000323441.10	HIF1A	ENSG00000100644	hypoxia inducible factor 1 subunit alpha Source HGNC Symbol Acc HGNC 4910
D08	SBH0048516	ENST00000544913.2	HMGCS2	ENSG00000134240	3-hydroxy-3-methylglutaryl-CoA synthase 2 Source HGNC Symbol Acc HGNC 5008
D09	SBH0381135	ENST00000299421.8	ILK	ENSG00000166333	integrin linked kinase Source HGNC Symbol Acc HGNC 6040
D10	SBH0223155	ENST00000285407.11	KLF10	ENSG00000155090	Kruppel like factor 10 Source HGNC Symbol Acc HGNC 11810
D11	SBH0489245	ENST00000425416.6	LPIN1	ENSG00000134324	lipin 1 Source HGNC Symbol Acc HGNC 13345
D12	SBH1220175	ENST00000311322.10	LPL	ENSG00000175445	lipoprotein lipase Source HGNC Symbol Acc HGNC 6677
E01	SBH0151089	ENST00000584308.1	MED1	ENSG00000125686	mediator complex subunit 1 Source HGNC Symbol Acc HGNC 9234
E02	SBH0538242	ENST00000262430.6	MLYCD	ENSG00000103150	malonyl-CoA decarboxylase Source HGNC Symbol Acc HGNC 7150
E03	SBH0471278	ENST00000372330.3	MMP9	ENSG00000100985	matrix metalloproteinase 9 Source HGNC Symbol Acc HGNC 7176
E04	SBH1220237	ENST00000371998.8	NCOA3	ENSG00000124151	nuclear receptor coactivator 3 Source HGNC Symbol Acc HGNC 7670
E05	SBH1220238	ENST00000612493.4	NCOA6	ENSG00000198646	nuclear receptor coactivator 6 Source HGNC Symbol Acc HGNC 15936
E06	SBH0458854	ENST00000616973.4	NR1H3	ENSG00000025434	nuclear receptor subfamily 1 group H member 3 Source HGNC Symbol Acc HGNC 7966
E07	SBH1220286	ENST00000545927.5	OLR1	ENSG00000173391	oxidized low density lipoprotein receptor 1 Source HGNC Symbol Acc HGNC 8133
E08	SBH1220291	ENST00000319441.6	PCK1	ENSG00000124253	phosphoenolpyruvate carboxykinase 1 Source HGNC Symbol Acc HGNC 8724
E09	SBH0202599	ENST00000560736.5	PCK2	ENSG00000100889	phosphoenolpyruvate carboxykinase 2, mitochondrial Source HGNC Symbol Acc HGNC 8725
E10	SBH0257483	ENST00000441549.7	PDPK1	ENSG00000140992	3-phosphoinositide dependent protein kinase 1 Source HGNC Symbol Acc HGNC 8816
E11	SBH0406688	ENST00000372420.5	PLTP	ENSG00000100979	phospholipid transfer protein Source HGNC Symbol Acc HGNC 9093
E12	SBH1220322	ENST00000407236.5	PPARA	ENSG00000186951	peroxisome proliferator activated receptor alpha Source HGNC Symbol Acc HGNC 9232
F01	SBH1220323	ENST00000418635.6	PPARD	ENSG00000112033	peroxisome proliferator activated receptor delta Source HGNC Symbol Acc HGNC 9235
F02	SBH0521265	ENST00000652522.1	PPARG	ENSG00000132170	peroxisome proliferator activated receptor gamma Source HGNC Symbol Acc HGNC 9236
F03	SBH0648879	ENST00000506055.5	PPARGC1A	ENSG00000109819	PPARG coactivator 1 alpha Source HGNC Symbol Acc HGNC 9237
F04	SBH0295595	ENST00000309241.10	PPARGC1B	ENSG00000155846	PPARG coactivator 1 beta Source HGNC Symbol Acc HGNC 30022
F05	SBH0078103	ENST00000413464.6	PPRC1	ENSG00000148840	peroxisome proliferator-activated receptor gamma, coactivator-related 1 Source HGNC Symbol Acc HGNC 30025
F06	SBH0044314	ENST00000467148.1	HELZ2	ENSG00000130589	helicase with zinc finger 2 Source HGNC Symbol Acc HGNC 30021
F07	SBH1225378	ENST00000371953.8	PTEN	ENSG00000171862	phosphatase and tensin homolog Source HGNC Symbol Acc HGNC 9588
F08	SBH0565802	ENST00000356384.4	RXRA	ENSG00000186350	retinoid X receptor alpha Source HGNC Symbol Acc HGNC 10477
F09	SBH0266843	ENST00000483821.1	RXRB	ENSG00000204231	retinoid X receptor beta Source HGNC Symbol Acc HGNC 10478
F10	SBH0620685	ENST00000619224.1	RXRG	ENSG00000143171	retinoid X receptor gamma Source HGNC Symbol Acc HGNC 10479

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBH0541153	ENST00000370355.3	SCD	ENSG00000099194	stearoyl-CoA desaturase Source HGNC Symbol Acc HGNC 10571
F12	SBH1220398	ENST00000212015.11	SIRT1	ENSG00000096717	sirtuin 1 Source HGNC Symbol Acc HGNC 14929
G01	SBH0140119	ENST00000447841.5	SLC22A5	ENSG00000197375	solute carrier family 22 member 5 Source HGNC Symbol Acc HGNC 10969
G02	SBH0159749	ENST00000593701.5	SLC27A1	ENSG00000130304	solute carrier family 27 member 1 Source HGNC Symbol Acc HGNC 10995
G03	SBH0259960	ENST00000267842.10	SLC27A2	ENSG00000140284	solute carrier family 27 member 2 Source HGNC Symbol Acc HGNC 10996
G04	SBH1220402	ENST00000300456.5	SLC27A4	ENSG00000167114	solute carrier family 27 member 4 Source HGNC Symbol Acc HGNC 10998
G05	SBH0355039	ENST00000263093.7	SLC27A5	ENSG00000083807	solute carrier family 27 member 5 Source HGNC Symbol Acc HGNC 10999
G06	SBH0235601	ENST00000395266.5	SLC27A6	ENSG00000113396	solute carrier family 27 member 6 Source HGNC Symbol Acc HGNC 11000
G07	SBH0618644	ENST00000469154.5	SMARCD3	ENSG00000082014	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily d, member 3 Source HGNC Symbol Acc HGNC 11108
G08	SBH0605702	ENST00000371241.5	SORBS1	ENSG00000095637	sorbin and SH3 domain containing 1 Source HGNC Symbol Acc HGNC 14565
G09	SBH0514958	ENST00000489153.1	SRC	ENSG00000197122	SRC proto-oncogene, non-receptor tyrosine kinase Source HGNC Symbol Acc HGNC 11283
G10	SBH0530804	ENST00000523948.5	TGS1	ENSG00000137574	trimethylguanosine synthase 1 Source HGNC Symbol Acc HGNC 17843
G11	SBH0485667	ENST00000486597.1	TXNIP	ENSG00000265972	thioredoxin interacting protein Source HGNC Symbol Acc HGNC 16952
G12	SBH0666067	ENST00000262999.4	UCP1	ENSG00000109424	uncoupling protein 1 Source HGNC Symbol Acc HGNC 12517
H01	SBH1220543	ENST00000646664.1	ACTB	ENSG00000075624	actin beta Source HGNC Symbol Acc HGNC 132
H02	SBH1220550	ENST00000558401.6	B2M	ENSG00000166710	beta-2-microglobulin Source HGNC Symbol Acc HGNC 914
H03	SBH1220545	ENST00000396861.5	GAPDH	ENSG00000111640	glyceraldehyde-3-phosphate dehydrogenase Source HGNC Symbol Acc HGNC 4141
H04	SBH1220546	ENST00000298556.8	HPRT1	ENSG00000165704	hypoxanthine phosphoribosyltransferase 1 Source HGNC Symbol Acc HGNC 5157
H05	SBH1220553	ENST00000546989.5	RPLP0	ENSG00000089157	ribosomal protein lateral stalk subunit P0 Source HGNC Symbol Acc HGNC 10371
H06	SBH1218553	Sybr_HGDC	HGDC	Sybr_HGDC	Human Genomic DNA Contamination
H07	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H08	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H09	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H10	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control
H11	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control
H12	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control



## Related products

Product	Contents	Cat. no.
QuantiNova LNA PCR QC Panel	These panels are designed to assess the quality of RNA samples before characterization using QuantiNova LNA PCR Focus Panels; available in 96-well, 384-well, and Rotor-Disc 100 formats	249940
QuantiNova Reverse Transcription Kit (10)*	For 10 x 20 $\mu$ l reactions: 20 $\mu$ l 8x gDNA Removal Mix, 10 $\mu$ l Reverse Transcription Enzyme, 40 $\mu$ l Reverse Transcription Mix (containing RT primers), 20 $\mu$ l Internal Control RNA, 1.9 ml RNase-Free Water	205410
QuantiNova SYBR Green RT-PCR Kit (100)*	For 100 x 20 $\mu$ l reactions: 1 ml QuantiNova SYBR Green RT-PCR Master Mix, 20 $\mu$ l QuantiNova SYBR Green RT Mix, 20 $\mu$ l Internal Control RNA, 500 $\mu$ l Yellow Template Dilution Buffer, 250 $\mu$ l ROX Reference Dye, 1.9 $\mu$ l RNase-Free Water	208152
QuantiNova SYBR Green PCR Kit (100)*	For 100 x 20 $\mu$ l reactions: 1 ml 2x QuantiNova SYBR Green PCR Master Mix, 500 $\mu$ l QuantiNova Yellow Template Dilution Buffer, 250 $\mu$ l QN ROX Reference Dye, 1.9 ml Water	208052

\*Larger kit sizes available.

The QuantiNova LNA PCR Focus Panels are intended for molecular biology applications. These products are not intended for the diagnosis, prevention or treatment of a disease.

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