

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

## Human Insulin Resistance

Cat. no. 249950 SBHS-156ZA

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	ACACA	ACACB	ACSL1	ACSL4	ADIPOQ	ADIPOR1	ADIPOR2	AKT3	ALOX5	APOE	CASP1	CCL2
B	CCR4	CCR5	CCR6	CD36	CD3E	CEBPA	CHUK	CNBP	CRLF2	CS	CXCR3	CXCR4
C	ADGRE1	FABP4	FASN	HK2	IFNG	IGF1	IGF1R	IKKB	IL18R1	IL1B	IL1R1	IL23R
D	IL6	CXCL8	INSR	IRS1	IRS2	JAK2	LEP	LEPR	LIPE	LPL	LTA4H	MAP2K1
E	MAPK3	MAPK9	MTOR	NAMPT	NFKBIA	NLRP3	OLR1	PCK1	PDE3B	PDK2	PDX1	PIK3CA
F	PIK3R1	PPARA	PPARG	PPARGC1A	PTPN1	PYCARD	RBP4	RELA	RETN	RPS6KB1	SCD	SERPINE1
G	SLC27A1	SLC2A4	SOCS3	SREBF1	SREBF2	STAT3	TLR4	TNF	TNFRSF1A	TNFRSF1B	UCP1	VLDLR
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	SBH0228804	ENST00000617649.4	ACACA	ENSG00000278540	acetyl-CoA carboxylase alpha Source HGNC Symbol Acc HGNC 84
A02	SBH0400080	ENST00000538526.5	ACACB	ENSG00000076555	acetyl-CoA carboxylase beta Source HGNC Symbol Acc HGNC 85
A03	SBH0588811	ENST00000505492.1	ACSL1	ENSG00000151726	acyl-CoA synthetase long chain family member 1 Source HGNC Symbol Acc HGNC 3569
A04	SBH0030689	ENST00000348502.10	ACSL4	ENSG00000068366	acyl-CoA synthetase long chain family member 4 Source HGNC Symbol Acc HGNC 3571
A05	SBH1219727	ENST00000320741.7	ADIPOQ	ENSG00000181092	adiponectin, C1Q and collagen domain containing Source HGNC Symbol Acc HGNC 13633
A06	SBH0648796	ENST00000340990.10	ADIPOR1	ENSG00000159346	adiponectin receptor 1 Source HGNC Symbol Acc HGNC 24040
A07	SBH0568791	ENST00000543456.1	ADIPOR2	ENSG00000006831	adiponectin receptor 2 Source HGNC Symbol Acc HGNC 24041
A08	SBH0031667	ENST00000463991.5	AKT3	ENSG00000117020	AKT serine/threonine kinase 3 Source HGNC Symbol Acc HGNC 393
A09	SBH1219736	ENST00000374391.7	ALOX5	ENSG00000012779	arachidonate 5-lipoxygenase Source HGNC Symbol Acc HGNC 435
A10	SBH0562930	ENST00000434152.5	APOE	ENSG00000130203	apolipoprotein E Source HGNC Symbol Acc HGNC 613
A11	SBH0054226	ENST00000526568.5	CASP1	ENSG00000137752	caspase 1 Source HGNC Symbol Acc HGNC 1499
A12	SBH0228134	ENST00000225831.4	CCL2	ENSG00000108691	C-C motif chemokine ligand 2 Source HGNC Symbol Acc HGNC 10618
B01	SBH1219853	ENST00000330953.5	CCR4	ENSG00000183813	C-C motif chemokine receptor 4 Source HGNC Symbol Acc HGNC 1605
B02	SBH1219854	ENST00000292303.4	CCR5	ENSG00000160791	C-C motif chemokine receptor 5 (gene/pseudogene) Source HGNC Symbol Acc HGNC 1606
B03	SBH1219855	ENST00000646493.1	CCR6	ENSG00000112486	C-C motif chemokine receptor 6 Source HGNC Symbol Acc HGNC 1607
B04	SBH0074710	ENST00000441109.6	CD36	ENSG00000135218	CD36 molecule Source HGNC Symbol Acc HGNC 1663
B05	SBH0232919	ENST00000528600.1	CD3E	ENSG00000198851	CD3e molecule Source HGNC Symbol Acc HGNC 1674
B06	SBH0261466	ENST00000498907.3	CEBPA	ENSG00000245848	CCAAT enhancer binding protein alpha Source HGNC Symbol Acc HGNC 1833
B07	SBH1219887	ENST000003370397.8	CHUK	ENSG00000213341	conserved helix-loop-helix ubiquitous kinase Source HGNC Symbol Acc HGNC 1974
B08	SBH0555395	ENST00000446936.6	CNBP	ENSG00000169714	CCHC-type zinc finger nucleic acid binding protein Source HGNC Symbol Acc HGNC 13164
B09	SBH0118945	ENST00000467626.6	CRLF2	ENSG00000205755	cytokine receptor like factor 2 Source HGNC Symbol Acc HGNC 14281
B10	SBH0563059	ENST00000546930.5	CS	ENSG00000062485	citrate synthase Source HGNC Symbol Acc HGNC 2422
B11	SBH1219934	ENST00000337693.4	CXCR3	ENSG00000186810	C-X-C motif chemokine receptor 3 Source HGNC Symbol Acc HGNC 4540
B12	SBH0591410	ENST00000241393.3	CXCR4	ENSG00000121966	C-X-C motif chemokine receptor 4 Source HGNC Symbol Acc HGNC 2561
C01	SBH0500143	ENST00000312053.9	ADGRE1	ENSG00000174837	adhesion G protein-coupled receptor E1 Source HGNC Symbol Acc HGNC 3336
C02	SBH0327090	ENST00000521734.1	FABP4	ENSG00000170323	fatty acid binding protein 4 Source HGNC Symbol Acc HGNC 3559
C03	SBH0282662	ENST00000635197.1	FASN	ENSG00000169710	fatty acid synthase Source HGNC Symbol Acc HGNC 3594
C04	SBH0186371	ENST00000290573.6	HK2	ENSG00000159399	hexokinase 2 Source HGNC Symbol Acc HGNC 4923
C05	SBH1220090	ENST00000229135.4	IFNG	ENSG00000111537	interferon gamma Source HGNC Symbol Acc HGNC 5438
C06	SBH1220091	ENST00000337514.10	IGF1	ENSG00000017427	insulin like growth factor 1 Source HGNC Symbol Acc HGNC 5464
C07	SBH0201042	ENST00000650285.1	IGF1R	ENSG00000140443	insulin like growth factor 1 receptor Source HGNC Symbol Acc HGNC 5465
C08	SBH0241248	ENST00000520810.6	IKKB	ENSG00000104365	inhibitor of nuclear factor kappa B kinase subunit beta Source HGNC Symbol Acc HGNC 5960
C09	SBH0245173	ENST00000334376.4	IL18R1	ENSG00000115604	interleukin 18 receptor 1 Source HGNC Symbol Acc HGNC 5988
C10	SBH0079231	ENST00000263341.6	IL1B	ENSG00000125538	interleukin 1 beta Source HGNC Symbol Acc HGNC 5992
		ENST00000424		ENSG000000	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBH1220104	272.5	IL1R1	115594	interleukin 1 receptor type 1 Source HGNC Symbol Acc HGNC 5993
C12	SBH1220108	ENST00000347310.9	IL23R	ENSG00000162594	interleukin 23 receptor Source HGNC Symbol Acc HGNC 19100
D01	SBH1220111	ENST00000401630.7	IL6	ENSG00000136244	interleukin 6 Source HGNC Symbol Acc HGNC 6018
D02	SBH1219932	ENST00000401931.1	CXCL8	ENSG00000169429	C-X-C motif chemokine ligand 8 Source HGNC Symbol Acc HGNC 6025
D03	SBH0198962	ENST00000600492.1	INSR	ENSG00000171105	insulin receptor Source HGNC Symbol Acc HGNC 6091
D04	SBH0130188	ENST00000305123.5	IRS1	ENSG00000169047	insulin receptor substrate 1 Source HGNC Symbol Acc HGNC 6125
D05	SBH0069279	ENST00000375856.5	IRS2	ENSG00000185950	insulin receptor substrate 2 Source HGNC Symbol Acc HGNC 6126
D06	SBH0334185	ENST00000381652.3	JAK2	ENSG00000096968	Janus kinase 2 Source HGNC Symbol Acc HGNC 6192
D07	SBH1220169	ENST00000308868.5	LEP	ENSG00000174697	leptin Source HGNC Symbol Acc HGNC 6553
D08	SBH0111165	ENST00000349533.10	LEPR	ENSG00000116678	leptin receptor Source HGNC Symbol Acc HGNC 6554
D09	SBH0638061	ENST00000601189.1	LIPE	ENSG00000079435	lipase E, hormone sensitive type Source HGNC Symbol Acc HGNC 6621
D10	SBH1220175	ENST00000311322.10	LPL	ENSG00000175445	lipoprotein lipase Source HGNC Symbol Acc HGNC 6677
D11	SBH0244991	ENST00000552789.5	LTA4H	ENSG00000111144	leukotriene A4 hydrolase Source HGNC Symbol Acc HGNC 6710
D12	SBH0671782	ENST00000307102.9	MAP2K1	ENSG00000169032	mitogen-activated protein kinase 1 Source HGNC Symbol Acc HGNC 6840
E01	SBH1220194	ENST00000478356.5	MAPK3	ENSG00000102882	mitogen-activated protein kinase 3 Source HGNC Symbol Acc HGNC 6877
E02	SBH0380071	ENST00000343111.10	MAPK9	ENSG00000050748	mitogen-activated protein kinase 9 Source HGNC Symbol Acc HGNC 6886
E03	SBH0492696	ENST00000361445.8	MTOR	ENSG00000198793	mechanistic target of rapamycin kinase Source HGNC Symbol Acc HGNC 3942
E04	SBH0477033	ENST00000463871.1	NAMPT	ENSG00000105835	nicotinamide phosphoribosyltransferase Source HGNC Symbol Acc HGNC 30092
E05	SBH0552847	ENST00000216797.9	NFKBIA	ENSG00000100906	NFKB inhibitor alpha Source HGNC Symbol Acc HGNC 7797
E06	SBH1220270	ENST00000391828.7	NLRP3	ENSG00000162711	NLR family pyrin domain containing 3 Source HGNC Symbol Acc HGNC 16400
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	SBH0236379	ENST00000455098.2	PDE3B	ENSG00000152270	phosphodiesterase 3B Source HGNC Symbol Acc HGNC 8779
E10	SBH0253705	ENST00000503176.5	PKD2	ENSG00000005882	pyruvate dehydrogenase kinase 2 Source HGNC Symbol Acc HGNC 8810
E11	SBH0232543	ENST00000381033.5	PDX1	ENSG00000139515	pancreatic and duodenal homeobox 1 Source HGNC Symbol Acc HGNC 6107
E12	SBH0121428	ENST00000462255.1	PIK3CA	ENSG00000121879	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha Source HGNC Symbol Acc HGNC 8975
F01	SBH0560623	ENST00000518813.5	PIK3R1	ENSG00000145675	phosphoinositide-3-kinase regulatory subunit 1 Source HGNC Symbol Acc HGNC 8979
F02	SBH1220322	ENST00000407236.5	PPARA	ENSG00000186951	peroxisome proliferator activated receptor alpha Source HGNC Symbol Acc HGNC 9232
F03	SBH0521265	ENST00000652522.1	PPARG	ENSG00000132170	peroxisome proliferator activated receptor gamma Source HGNC Symbol Acc HGNC 9236
F04	SBH0648879	ENST00000506055.5	PPARGC1A	ENSG00000109819	PPARG coactivator 1 alpha Source HGNC Symbol Acc HGNC 9237
F05	SBH0048297	ENST00000541713.5	PTPN1	ENSG00000196396	protein tyrosine phosphatase, non-receptor type 1 Source HGNC Symbol Acc HGNC 9642
F06	SBH1220348	ENST00000247470.10	PYCARD	ENSG00000103490	PYD and CARD domain containing Source HGNC Symbol Acc HGNC 16608
F07	SBH0091059	ENST00000371469.2	RBP4	ENSG00000138207	retinol binding protein 4 Source HGNC Symbol Acc HGNC 9922
F08	SBH1220363	ENST00000532999.5	RELA	ENSG00000173039	RELA proto-oncogene, NF-kB subunit Source HGNC Symbol Acc HGNC 9955
F09	SBH0623598	ENST00000629642.1	RETN	ENSG00000104918	resistin Source HGNC Symbol Acc HGNC 20389
F10	SBH1220379	ENST00000406116.7	RPS6KB1	ENSG00000108443	ribosomal protein S6 kinase B1 Source HGNC Symbol Acc HGNC 10436

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBH0541153	ENST00000370355.3	SCD	ENSG00000099194	stearoyl-CoA desaturase Source HGNC Symbol Acc HGNC 10571
F12	SBH1220389	ENST00000223095.4	SERPINE1	ENSG00000106366	serpin family E member 1 Source HGNC Symbol Acc HGNC 8583
G01	SBH0159749	ENST00000593701.5	SLC27A1	ENSG00000130304	solute carrier family 27 member 1 Source HGNC Symbol Acc HGNC 10995
G02	SBH0509274	ENST00000424875.2	SLC2A4	ENSG00000181856	solute carrier family 2 member 4 Source HGNC Symbol Acc HGNC 11009
G03	SBH1220413	ENST00000330871.3	SOCS3	ENSG00000184557	suppressor of cytokine signaling 3 Source HGNC Symbol Acc HGNC 19391
G04	SBH0652491	ENST00000423161.3	SREBF1	ENSG00000072310	sterol regulatory element binding transcription factor 1 Source HGNC Symbol Acc HGNC 11289
G05	SBH0331510	ENST00000424354.5	SREBF2	ENSG00000198911	sterol regulatory element binding transcription factor 2 Source HGNC Symbol Acc HGNC 11290
G06	SBH0341614	ENST00000404395.3	STAT3	ENSG00000168610	signal transducer and activator of transcription 3 Source HGNC Symbol Acc HGNC 11364
G07	SBH0092782	ENST00000355622.8	TLR4	ENSG00000136869	toll like receptor 4 Source HGNC Symbol Acc HGNC 11850
G08	SBH1220471	ENST00000449264.3	TNF	ENSG00000232810	tumor necrosis factor Source HGNC Symbol Acc HGNC 11892
G09	SBH0080951	ENST00000162749.6	TNFRSF1A	ENSG00000067182	TNF receptor superfamily member 1A Source HGNC Symbol Acc HGNC 11916
G10	SBH1220475	ENST00000536782.2	TNFRSF1B	ENSG00000028137	TNF receptor superfamily member 1B Source HGNC Symbol Acc HGNC 11917
G11	SBH0666067	ENST00000262999.4	UCP1	ENSG00000109424	uncoupling protein 1 Source HGNC Symbol Acc HGNC 12517
G12	SBH0483127	ENST00000382099.2	VLDLR	ENSG00000147852	very low density lipoprotein receptor Source HGNC Symbol Acc HGNC 12698
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.

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](http://www.qiagen.com) or can be requested from QIAGEN Technical Services or your local distributor.

Trademarks: QIAGEN®, LNA®, QuantiNova®, Sample to Insight® (QIAGEN Group); SYBR® (Life Technologies Corp.). Registered names, trademarks, etc. used in this document, even when not specifically marked as such, are not to be considered unprotected by law.

09/2019 © 2019 QIAGEN, all rights reserved.