

QuantiNova® LNA® PCR Focus Panels (Rotor-Gene® Format)

Human Hypoxia Signaling Pathway

Cat. no. 249950 SBHS-032ZR

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 (Rotor-Gene): QuantiNova LNA PCR Focus Panel

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. Refer to the QuantiNova LNA PCR System Handbook at www.qiagen.com for further details.

	1	2	3	4	5	6	7	8	9	10	11	12
A	ADM	ADORA2B	ALDOA	ANGPTL4	ANKRD37	ANKA2	APEX1	ARNT	ATR	BHLHE40	BLM	BNIP3
B	BNIP3L	BTG1	CA9	CCNG2	COP55	CTSA	DDIT4	DNAJC5	EDN1	EGLN1	EGLN2	EGR1
C	EIF4EBP1	ENO1	EPO	ERO1A	F10	F3	FOS	GBE1	GPI	GYS1	HIF1A	HIF1AN
D	HIF3A	HK2	HMOX1	HNF4A	IER3	IGFBP3	JMJD6	LDHA	LGALS3	LOX	MAP3K1	MET
E	MIF	MMP9	MXI1	NAMPT	NCOA1	NDRG1	NFKB1	NOS3	ODC1	P4HA1	P4HB	PKD1
F	PER1	PFKFB3	PFKFB4	PFKL	PFKP	PGAM1	PGF	PGK1	PIM1	PKM	PLAU	RBPJ
G	RUVBL2	SERPINE1	SLC16A3	SLC2A1	SLC2A3	TFRC	TP53	TP11	TXNIP	USF2	VDAC1	VEGFA
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	SBH1219728	ENST00000525063.2	ADM	ENSG00000148926	adrenomedullin Source HGNC Symbol Acc HGNC 259
A02	SBH0113258	ENST00000582124.1	ADORA2B	ENSG00000170425	adenosine A2b receptor Source HGNC Symbol Acc HGNC 264
A03	SBH0597315	ENST00000564546.6	ALDOA	ENSG00000149925	aldolase, fructose-bisphosphate A Source HGNC Symbol Acc HGNC 414
A04	SBH0321217	ENST00000393962.6	ANGPTL4	ENSG00000167772	angiopoietin like 4 Source HGNC Symbol Acc HGNC 16039
A05	SBH0492598	ENST00000511393.4	ANKRD37	ENSG00000186352	ankyrin repeat domain 37 Source HGNC Symbol Acc HGNC 29593
A06	SBH0324193	ENST00000561022.5	ANXA2	ENSG00000182718	annexin A2 Source HGNC Symbol Acc HGNC 537
A07	SBH0279561	ENST00000555414.5	APEX1	ENSG00000100823	apurinic/apyrimidinic endodeoxyribonuclease 1 Source HGNC Symbol Acc HGNC 587
A08	SBH1219751	ENST00000358595.10	ARNT	ENSG00000143437	aryl hydrocarbon receptor nuclear translocator Source HGNC Symbol Acc HGNC 700
A09	SBH1219775	ENST00000350721.9	ATR	ENSG00000175054	ATR serine/threonine kinase Source HGNC Symbol Acc HGNC 882
A10	SBH0192838	ENST00000467610.1	BHLHE40	ENSG00000134107	basic helix-loop-helix family member e40 Source HGNC Symbol Acc HGNC 1046
A11	SBH1219799	ENST00000355112.8	BLM	ENSG00000197299	BLM RecQ like helicase Source HGNC Symbol Acc HGNC 1058
A12	SBH1219810	ENST00000540159.3	BNIP3	ENSG00000176171	BCL2 interacting protein 3 Source HGNC Symbol Acc HGNC 1084
B01	SBH1219811	ENST00000523515.5	BNIP3L	ENSG00000104765	BCL2 interacting protein 3 like Source HGNC Symbol Acc HGNC 1085
B02	SBH0199707	ENST00000552315.1	BTG1	ENSG00000133639	BTG anti-proliferation factor 1 Source HGNC Symbol Acc HGNC 1130
B03	SBH1219820	ENST00000378357.9	CA9	ENSG00000107159	carbonic anhydrase 9 Source HGNC Symbol Acc HGNC 1383
B04	SBH1219848	ENST00000512918.5	CCNG2	ENSG00000138764	cyclin G2 Source HGNC Symbol Acc HGNC 1593
B05	SBH0450683	ENST00000517793.1	COP55	ENSG00000121022	COP9 signalosome subunit 5 Source HGNC Symbol Acc HGNC 2240
B06	SBH0318447	ENST00000372484.7	CTSA	ENSG000001064601	cathepsin A Source HGNC Symbol Acc HGNC 9251
B07	SBH0065799	ENST00000307365.4	DDIT4	ENSG00000168209	DNA damage inducible transcript 4 Source HGNC Symbol Acc HGNC 24944
B08	SBH0270601	ENST00000360864.9	DNAJC5	ENSG00000101152	DnaJ heat shock protein family (Hsp40) member C5 Source HGNC Symbol Acc HGNC 16235
B09	SBH1219968	ENST00000379375.6	EDN1	ENSG000001078401	endothelin 1 Source HGNC Symbol Acc HGNC 3176
B10	SBH0371478	ENST00000476717.1	EGLN1	ENSG00000135766	egl-9 family hypoxia inducible factor 1 Source HGNC Symbol Acc HGNC 1232
B11	SBH0252042	ENST00000595051.1	EGLN2	ENSG000001269858	egl-9 family hypoxia inducible factor 2 Source HGNC Symbol Acc HGNC 14660
B12	SBH0290504	ENST00000239938.5	EGR1	ENSG00000120738	early growth response 1 Source HGNC Symbol Acc HGNC 3238
C01	SBH0094252	ENST00000338825.5	EIF4EBP1	ENSG00000187840	eukaryotic translation initiation factor 4E binding protein 1 Source HGNC Symbol Acc HGNC 3288
C02	SBH0555349	ENST00000234590.10	ENO1	ENSG000001074800	enolase 1 Source HGNC Symbol Acc HGNC 3350
C03	SBH1219979	ENST00000252723.3	EPO	ENSG00000130427	erythropoietin Source HGNC Symbol Acc HGNC 3415
C04	SBH0370090	ENST00000395686.8	ERO1A	ENSG00000197930	endoplasmic reticulum oxidoreductase 1 alpha Source HGNC Symbol Acc HGNC 13280
C05	SBH0660324	ENST00000477269.5	F10	ENSG00000126218	coagulation factor X Source HGNC Symbol Acc HGNC 3528
C06	SBH1219990	ENST00000334047.12	F3	ENSG00000117525	coagulation factor III, tissue factor Source HGNC Symbol Acc HGNC 3541
C07	SBH1220004	ENST00000554617.1	FOS	ENSG00000170345	Fos proto-oncogene, AP-1 transcription factor subunit Source HGNC Symbol Acc HGNC 3796
C08	SBH1220023	ENST00000489715.1	GBE1	ENSG00000114480	1,4-alpha-glucan branching enzyme 1 Source HGNC Symbol Acc HGNC 4180
C09	SBH1220031	ENST00000644934.1	GPI	ENSG00000105220	glucose-6-phosphate isomerase Source HGNC Symbol Acc HGNC 4458
C10	SBH1220045	ENST00000323798.8	GYS1	ENSG00000104812	glycogen synthase 1 Source HGNC Symbol Acc HGNC 4706
		ENST00000323		ENSG000001	hypoxia inducible factor 1 subunit alpha Source HGNC Symbol Acc HGNC

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBH1220060	441.10	HIF1A	100644	4910
C12	SBH0068627	ENST00000528044.1	HIF1AN	ENSG00000166135	hypoxia inducible factor 1 subunit alpha inhibitor Source HGNC Symbol Acc HGNC 17113
D01	SBH0001291	ENST00000528563.5	HIF3A	ENSG00000124440	hypoxia inducible factor 3 subunit alpha Source HGNC Symbol Acc HGNC 15825
D02	SBH0186371	ENST00000290573.6	HK2	ENSG00000159399	hexokinase 2 Source HGNC Symbol Acc HGNC 4923
D03	SBH1220067	ENST00000216117.9	HMOX1	ENSG00000100292	heme oxygenase 1 Source HGNC Symbol Acc HGNC 5013
D04	SBH0483648	ENST00000609795.5	HNF4A	ENSG00000101076	hepatocyte nuclear factor 4 alpha Source HGNC Symbol Acc HGNC 5024
D05	SBH0515452	ENST00000376377.2	IER3	ENSG00000137331	immediate early response 3 Source HGNC Symbol Acc HGNC 5392
D06	SBH1220092	ENST00000275521.10	IGFBP3	ENSG00000146674	insulin like growth factor binding protein 3 Source HGNC Symbol Acc HGNC 5472
D07	SBH1218232	ENST00000397625.8	JMJD6	ENSG00000070495	jumonji domain containing 6, arginine demethylase and lysine hydroxylase Source HGNC Symbol Acc HGNC 19355
D08	SBH1225370	ENST00000540430.5	LDHA	ENSG00000134333	lactate dehydrogenase A Source HGNC Symbol Acc HGNC 6535
D09	SBH0412667	ENST00000553755.5	LGALS3	ENSG00000131981	galectin 3 Source HGNC Symbol Acc HGNC 6563
D10	SBH1220174	ENST00000639739.11	LOX	ENSG00000113083	lysyl oxidase Source HGNC Symbol Acc HGNC 6664
D11	SBH1220190	ENST00000399503.4	MAP3K1	ENSG00000095015	mitogen-activated protein kinase kinase kinase 1 Source HGNC Symbol Acc HGNC 6848
D12	SBH1220210	ENST00000318493.11	MET	ENSG00000105976	MET proto-oncogene, receptor tyrosine kinase Source HGNC Symbol Acc HGNC 7029
E01	SBH1220212	ENST00000215754.8	MIF	ENSG00000240972	macrophage migration inhibitory factor Source HGNC Symbol Acc HGNC 7097
E02	SBH0471278	ENST00000372330.3	MMP9	ENSG00000100985	matrix metalloproteinase 9 Source HGNC Symbol Acc HGNC 7176
E03	SBH0223198	ENST00000239007.11	MXI1	ENSG00000119950	MAX interactor 1, dimerization protein Source HGNC Symbol Acc HGNC 7534
E04	SBH0477033	ENST00000463871.1	NAMPT	ENSG00000105835	nicotinamide phosphoribosyltransferase Source HGNC Symbol Acc HGNC 30092
E05	SBH0605604	ENST00000348332.7	NCOA1	ENSG00000084676	nuclear receptor coactivator 1 Source HGNC Symbol Acc HGNC 7668
E06	SBH0580332	ENST00000519228.5	NRG1	ENSG00000104419	N-myc downstream regulated 1 Source HGNC Symbol Acc HGNC 7679
E07	SBH1220264	ENST00000651197.1	NFKB1	ENSG00000109320	nuclear factor kappa B subunit 1 Source HGNC Symbol Acc HGNC 7794
E08	SBH1220272	ENST00000297494.8	NOS3	ENSG00000164867	nitric oxide synthase 3 Source HGNC Symbol Acc HGNC 7876
E09	SBH0286890	ENST00000405333.5	ODC1	ENSG00000115758	ornithine decarboxylase 1 Source HGNC Symbol Acc HGNC 8109
E10	SBH0252226	ENST00000394890.6	P4HA1	ENSG00000122884	prolyl 4-hydroxylase subunit alpha 1 Source HGNC Symbol Acc HGNC 8546
E11	SBH0067668	ENST00000478034.5	P4HB	ENSG00000185624	prolyl 4-hydroxylase subunit beta Source HGNC Symbol Acc HGNC 8548
E12	SBH0017980	ENST00000410055.5	PKD1	ENSG00000152256	pyruvate dehydrogenase kinase 1 Source HGNC Symbol Acc HGNC 8809
F01	SBH0546364	ENST00000578089.1	PER1	ENSG00000179094	period circadian regulator 1 Source NCBI gene Acc 5187
F02	SBH0359384	ENST00000360521.7	PFKFB3	ENSG00000170525	6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase 3 Source HGNC Symbol Acc HGNC 8874
F03	SBH0046014	ENST00000490115.5	PFKFB4	ENSG00000114268	6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase 4 Source HGNC Symbol Acc HGNC 8875
F04	SBH1220301	ENST00000349048.9	PFKL	ENSG00000141959	phosphofructokinase, liver type Source HGNC Symbol Acc HGNC 8876
F05	SBH0325992	ENST00000433193.2	PFKP	ENSG00000067057	phosphofructokinase, platelet Source HGNC Symbol Acc HGNC 8878
F06	SBH0026737	ENST00000467867.1	PGAM1	ENSG00000171314	phosphoglycerate mutase 1 Source HGNC Symbol Acc HGNC 8888
F07	SBH1220303	ENST00000238607.10	PGF	ENSG00000119630	placental growth factor Source HGNC Symbol Acc HGNC 8893
F08	SBH1220304	ENST00000644362.1	PGK1	ENSG00000102144	phosphoglycerate kinase 1 Source HGNC Symbol Acc HGNC 8896
F09	SBH0087580	ENST00000468243.5	PIM1	ENSG00000137193	Pim-1 proto-oncogene, serine/threonine kinase Source HGNC Symbol Acc HGNC 8986
F10	SBH0365786	ENST00000568883.5	PKM	ENSG00000067225	pyruvate kinase M1/2 Source HGNC Symbol Acc HGNC 9021

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBH1220315	ENST00000446342.5	PLAU	ENSG00000122861	plasminogen activator, urokinase Source HGNC Symbol Acc HGNC 9052
F12	SBH0412189	ENST00000510778.6	RBPJ	ENSG00000168214	recombination signal binding protein for immunoglobulin kappa J region Source HGNC Symbol Acc HGNC 5724
G01	SBH0122996	ENST00000594338.1	RUVBL2	ENSG00000183207	RuvB like AAA ATPase 2 Source HGNC Symbol Acc HGNC 10475
G02	SBH1220389	ENST00000223095.4	SERPINE1	ENSG00000106366	serpin family E member 1 Source HGNC Symbol Acc HGNC 8583
G03	SBH0175803	ENST00000578684.5	SLC16A3	ENSG00000141526	solute carrier family 16 member 3 Source HGNC Symbol Acc HGNC 10924
G04	SBH0102394	ENST00000426263.8	SLC2A1	ENSG00000117394	solute carrier family 2 member 1 Source HGNC Symbol Acc HGNC 11005
G05	SBH0631058	ENST00000476634.1	SLC2A3	ENSG00000059804	solute carrier family 2 member 3 Source HGNC Symbol Acc HGNC 11007
G06	SBH0309807	ENST00000477148.1	TFRC	ENSG00000072274	transferrin receptor Source HGNC Symbol Acc HGNC 11763
G07	SBH1220486	ENST00000445888.6	TP53	ENSG00000141510	tumor protein p53 Source HGNC Symbol Acc HGNC 11998
G08	SBH1220489	ENST00000613953.4	TP11	ENSG00000111669	triosephosphate isomerase 1 Source HGNC Symbol Acc HGNC 12009
G09	SBH0485667	ENST00000486597.1	TXNIP	ENSG00000265972	thioredoxin interacting protein Source HGNC Symbol Acc HGNC 16952
G10	SBH0001451	ENST00000594064.5	USF2	ENSG00000105698	upstream transcription factor 2, c-fos interacting Source HGNC Symbol Acc HGNC 12594
G11	SBH0183050	ENST00000489906.5	VDAC1	ENSG00000213585	voltage dependent anion channel 1 Source HGNC Symbol Acc HGNC 12669
G12	SBH0420322	ENST00000425836.6	VEGFA	ENSG00000112715	vascular endothelial growth factor A Source HGNC Symbol Acc HGNC 12680
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 μ l reactions: 20 μ l 8x gDNA Removal Mix, 10 μ l Reverse Transcription Enzyme, 40 μ l Reverse Transcription Mix (containing RT primers), 20 μ l Internal Control RNA, 1.9 ml RNase-Free Water	205410
QuantiNova SYBR Green RT-PCR Kit (100)*	For 100 x 20 μ l reactions: 1 ml QuantiNova SYBR Green RT-PCR Master Mix, 20 μ l QuantiNova SYBR Green RT Mix, 20 μ l Internal Control RNA, 500 μ l Yellow Template Dilution Buffer, 250 μ l ROX Reference Dye, 1.9 μ l RNase-Free Water	208152
QuantiNova SYBR Green PCR Kit (100)*	For 100 x 20 μ l reactions: 1 ml 2x QuantiNova SYBR Green PCR Master Mix, 500 μ l QuantiNova Yellow Template Dilution Buffer, 250 μ 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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