

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

## Human Hypertension

Cat. no. 249950 SBHS-037ZA

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	ACE	ACE2	ACTA2	ADM	ADRA1B	ADRA1D	ADRB1	AGT	AGTR1	AGTR2	ALOX5	ARG2
B	ATP2C1	ATP6AP2	AVP	AVPR1A	AVPR1B	BDKRB1	BDKRB2	BMPR2	CACNA1C	CALCA	CAV1	CHRNA1
C	CHRNB1	CLIC1	CLIC4	CLIC5	CNGA1	CNGA2	CNGA3	CNGA4	CNGB1	CNGB3	CPS1	DRD3
D	DRD5	ECE1	EDN1	EDN2	EDNRA	EDNRB	EPHX2	GCH1	GCHFR	GUCY1A1	GUCY1B1	HIF1A
E	ITPR1	ITPR2	KCNJ8	KCNMA1	KNG1	MYLK	MYLK2	MYLK3	NOS3	NOSIP	NOSTRIN	NPPB
F	NPPC	NPR1	NPY1R	P2RX4	PDE3A	PDE3B	PDE5A	PLCG1	PLCG2	PRKG1	PRKG2	PTGIR
G	PTGS1	PTGS2	REN	S1PR1	SCNN1A	SCNN1B	SCNN1G	SLC7A1	SPHK1	SPHK2	UTS2	UTS2R
H	ACTB	B2M	GAPDH	HRPT1	RPLP0	HGDC	QIC	QIC	QIC	PPC	PPC	PPC

## Gene table: QuantiNova LNA PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	SBH1219717	ENST00000428043.5	ACE	ENSG00000159640	angiotensin I converting enzyme Source HGNC Symbol Acc HGNC 2707
A02	SBH0088794	ENST00000427411.1	ACE2	ENSG00000130234	angiotensin I converting enzyme 2 Source HGNC Symbol Acc HGNC 13557
A03	SBH0247260	ENST00000224784.10	ACTA2	ENSG00000107796	actin, alpha 2, smooth muscle, aorta Source HGNC Symbol Acc HGNC 130
A04	SBH1219728	ENST00000525063.2	ADM	ENSG00000148926	adrenomedullin Source HGNC Symbol Acc HGNC 259
A05	SBH0418597	ENST00000306675.5	ADRA1B	ENSG00000170214	adrenoceptor alpha 1B Source HGNC Symbol Acc HGNC 278
A06	SBH0314853	ENST00000379453.5	ADRA1D	ENSG00000171873	adrenoceptor alpha 1D Source HGNC Symbol Acc HGNC 280
A07	SBH0305943	ENST00000369295.3	ADRB1	ENSG00000043591	adrenoceptor beta 1 Source HGNC Symbol Acc HGNC 285
A08	SBH1219729	ENST00000366667.5	AGT	ENSG00000135744	angiotensinogen Source HGNC Symbol Acc HGNC 333
A09	SBH0123687	ENST00000418473.6	AGTR1	ENSG00000144891	angiotensin II receptor type 1 Source HGNC Symbol Acc HGNC 336
A10	SBH0278237	ENST00000371906.5	AGTR2	ENSG00000180772	angiotensin II receptor type 2 Source HGNC Symbol Acc HGNC 338
A11	SBH1219736	ENST00000374391.7	ALOX5	ENSG00000012779	arachidonate 5-lipoxygenase Source HGNC Symbol Acc HGNC 435
A12	SBH0617061	ENST00000556491.1	ARG2	ENSG00000081181	arginase 2 Source HGNC Symbol Acc HGNC 664
B01	SBH0213988	ENST00000510168.5	ATP2C1	ENSG00000017260	ATPase secretory pathway Ca2+ transporting 1 Source HGNC Symbol Acc HGNC 13211
B02	SBH0091872	ENST00000638153.1	ATP6AP2	ENSG00000182220	ATPase H+ transporting accessory protein 2 Source HGNC Symbol Acc HGNC 18305
B03	SBH0008216	ENST00000380293.3	AVP	ENSG00000101200	arginine vasopressin Source HGNC Symbol Acc HGNC 894
B04	SBH0085505	ENST00000550940.1	AVPR1A	ENSG00000166148	arginine vasopressin receptor 1A Source HGNC Symbol Acc HGNC 895
B05	SBH0242752	ENST00000367126.5	AVPR1B	ENSG00000198049	arginine vasopressin receptor 1B Source HGNC Symbol Acc HGNC 896
B06	SBH0382870	ENST00000553356.1	BDKRB1	ENSG00000100739	bradykinin receptor B1 Source HGNC Symbol Acc HGNC 1029
B07	SBH0565040	ENST00000554311.1	BDKRB2	ENSG00000168398	bradykinin receptor B2 Source HGNC Symbol Acc HGNC 1030
B08	SBH1219808	ENST00000638587.1	BMPR2	ENSG00000204217	bone morphogenetic protein receptor type 2 Source HGNC Symbol Acc HGNC 1078
B09	SBH0050656	ENST00000399603.5	CACNA1C	ENSG00000151067	calcium voltage-gated channel subunit alpha1 C Source HGNC Symbol Acc HGNC 1390
B10	SBH0441635	ENST00000331587.8	CALCA	ENSG00000110680	calcitonin related polypeptide alpha Source HGNC Symbol Acc HGNC 1437
B11	SBH0105254	ENST00000451122.5	CAV1	ENSG00000105974	caveolin 1 Source HGNC Symbol Acc HGNC 1527
B12	SBH0490696	ENST00000409219.5	CHRNA1	ENSG00000138435	cholinergic receptor nicotinic alpha 1 subunit Source HGNC Symbol Acc HGNC 1955
C01	SBH0237310	ENST00000576360.1	CHRNB1	ENSG00000170175	cholinergic receptor nicotinic beta 1 subunit Source HGNC Symbol Acc HGNC 1961
C02	SBH0392507	ENST00000375779.6	CLIC1	ENSG00000213719	chloride intracellular channel 1 Source HGNC Symbol Acc HGNC 2062
C03	SBH0136802	ENST00000488683.1	CLIC4	ENSG00000169504	chloride intracellular channel 4 Source HGNC Symbol Acc HGNC 13518
C04	SBH0400498	ENST00000339561.11	CLIC5	ENSG00000112782	chloride intracellular channel 5 Source HGNC Symbol Acc HGNC 13517
C05	SBH0017517	ENST00000513178.1	CNGA1	ENSG00000198515	cyclic nucleotide gated channel alpha 1 Source HGNC Symbol Acc HGNC 2148
C06	SBH0262747	ENST00000329903.4	CNGA2	ENSG00000183862	cyclic nucleotide gated channel alpha 2 Source HGNC Symbol Acc HGNC 2149
C07	SBH0500410	ENST00000409937.1	CNGA3	ENSG00000144191	cyclic nucleotide gated channel alpha 3 Source HGNC Symbol Acc HGNC 2150
C08	SBH0426981	ENST00000533426.5	CNGA4	ENSG00000132259	cyclic nucleotide gated channel alpha 4 Source HGNC Symbol Acc HGNC 2152
C09	SBH0121358	ENST00000251102.12	CNGB1	ENSG00000070729	cyclic nucleotide gated channel beta 1 Source HGNC Symbol Acc HGNC 2151
C10	SBH0363384	ENST00000519777.1	CNGB3	ENSG00000170289	cyclic nucleotide gated channel beta 3 Source HGNC Symbol Acc HGNC 2153
		ENST00000430		ENSG000000	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBH0289956	249.6	CPS1	021826	carbamoyl-phosphate synthase 1 Source HGNC Symbol Acc HGNC 2323
C12	SBH0383975	ENST00000383673.4	DRD3	ENSG00000151577	dopamine receptor D3 Source HGNC Symbol Acc HGNC 3024
D01	SBH0594176	ENST00000304374.3	DRD5	ENSG00000169676	dopamine receptor D5 Source HGNC Symbol Acc HGNC 3026
D02	SBH0345173	ENST00000415912.6	ECE1	ENSG00000117298	endothelin converting enzyme 1 Source HGNC Symbol Acc HGNC 3146
D03	SBH1219968	ENST00000379375.6	EDN1	ENSG00000078401	endothelin 1 Source HGNC Symbol Acc HGNC 3176
D04	SBH1219969	ENST00000372587.5	EDN2	ENSG00000127129	endothelin 2 Source HGNC Symbol Acc HGNC 3177
D05	SBH0152584	ENST00000324300.10	EDNRA	ENSG00000151617	endothelin receptor type A Source HGNC Symbol Acc HGNC 3179
D06	SBH0590788	ENST00000475537.2	EDNRB	ENSG00000136160	endothelin receptor type B Source HGNC Symbol Acc HGNC 3180
D07	SBH0538671	ENST00000521400.5	EPHX2	ENSG00000120915	epoxide hydrolase 2 Source HGNC Symbol Acc HGNC 3402
D08	SBH0533750	ENST00000622544.4	GCH1	ENSG00000131979	GTP cyclohydrolase 1 Source HGNC Symbol Acc HGNC 4193
D09	SBH0277644	ENST00000558467.1	GCHFR	ENSG00000137880	GTP cyclohydrolase I feedback regulator Source HGNC Symbol Acc HGNC 4194
D10	SBH0053718	ENST00000443668.6	GUCY1A1	ENSG00000164116	guanylate cyclase 1 soluble subunit alpha 1 Source HGNC Symbol Acc HGNC 4685
D11	SBH0489303	ENST00000513437.1	GUCY1B1	ENSG00000061918	guanylate cyclase 1 soluble subunit beta 1 Source HGNC Symbol Acc HGNC 4687
D12	SBH1220060	ENST00000323441.10	HIF1A	ENSG00000100644	hypoxia inducible factor 1 subunit alpha Source HGNC Symbol Acc HGNC 4910
E01	SBH0303285	ENST00000649694.1	ITPR1	ENSG00000150995	inositol 1,4,5-trisphosphate receptor type 1 Source HGNC Symbol Acc HGNC 6180
E02	SBH0326340	ENST00000536627.1	ITPR2	ENSG00000123104	inositol 1,4,5-trisphosphate receptor type 2 Source HGNC Symbol Acc HGNC 6181
E03	SBH0392764	ENST00000240662.3	KCNJ8	ENSG00000121361	potassium voltage-gated channel subfamily J member 8 Source HGNC Symbol Acc HGNC 6269
E04	SBH0537480	ENST00000639406.1	KCNMA1	ENSG00000156113	potassium calcium-activated channel subfamily M alpha 1 Source HGNC Symbol Acc HGNC 6284
E05	SBH0281530	ENST00000645909.1	KNG1	ENSG00000113889	kininogen 1 Source HGNC Symbol Acc HGNC 6383
E06	SBH0229368	ENST00000578202.1	MYLK	ENSG00000065534	myosin light chain kinase Source HGNC Symbol Acc HGNC 7590
E07	SBH0093497	ENST00000375985.4	MYLK2	ENSG00000101306	myosin light chain kinase 2 Source HGNC Symbol Acc HGNC 16243
E08	SBH0145154	ENST00000565182.5	MYLK3	ENSG00000140795	myosin light chain kinase 3 Source HGNC Symbol Acc HGNC 29826
E09	SBH1220272	ENST00000297494.8	NOS3	ENSG00000164867	nitric oxide synthase 3 Source HGNC Symbol Acc HGNC 7876
E10	SBH0066153	ENST00000596358.5	NOSIP	ENSG00000142546	nitric oxide synthase interacting protein Source HGNC Symbol Acc HGNC 17946
E11	SBH0213802	ENST00000445023.6	NOSTRIN	ENSG00000163072	nitric oxide synthase trafficking Source HGNC Symbol Acc HGNC 20203
E12	SBH1220277	ENST00000376468.4	NPPB	ENSG00000120937	natriuretic peptide B Source HGNC Symbol Acc HGNC 7940
F01	SBH0240336	ENST00000409852.2	NPPC	ENSG00000163273	natriuretic peptide C Source HGNC Symbol Acc HGNC 7941
F02	SBH1220278	ENST00000368680.4	NPR1	ENSG00000169418	natriuretic peptide receptor 1 Source HGNC Symbol Acc HGNC 7943
F03	SBH0089061	ENST00000509586.5	NPY1R	ENSG00000164128	neuropeptide Y receptor Y1 Source HGNC Symbol Acc HGNC 7956
F04	SBH0333860	ENST00000359949.11	P2RX4	ENSG00000135124	purinergic receptor P2X 4 Source HGNC Symbol Acc HGNC 8535
F05	SBH0372566	ENST00000359062.3	PDE3A	ENSG00000172572	phosphodiesterase 3A Source HGNC Symbol Acc HGNC 8778
F06	SBH0236379	ENST00000455098.2	PDE3B	ENSG00000152270	phosphodiesterase 3B Source HGNC Symbol Acc HGNC 8779
F07	SBH0155927	ENST00000354960.8	PDE5A	ENSG00000138735	phosphodiesterase 5A Source HGNC Symbol Acc HGNC 8784
F08	SBH0415853	ENST00000608689.5	PLCG1	ENSG00000124181	phospholipase C gamma 1 Source HGNC Symbol Acc HGNC 9065
F09	SBH0377372	ENST00000569929.5	PLCG2	ENSG00000197943	phospholipase C gamma 2 Source HGNC Symbol Acc HGNC 9066
F10	SBH0000909	ENST00000645324.1	PRKG1	ENSG00000185532	protein kinase cGMP-dependent 1 Source HGNC Symbol Acc HGNC 9414

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBH0084408	ENST00000395578.3	PRKG2	ENSG00000138669	protein kinase cGMP-dependent 2 Source HGNC Symbol Acc HGNC 9416
F12	SBH0573956	ENST00000598865.5	PTGIR	ENSG00000160013	prostaglandin I2 receptor Source HGNC Symbol Acc HGNC 9602
G01	SBH1220343	ENST00000540753.6	PTGS1	ENSG00000095303	prostaglandin-endoperoxide synthase 1 Source HGNC Symbol Acc HGNC 9604
G02	SBH1220344	ENST00000367468.10	PTGS2	ENSG00000073756	prostaglandin-endoperoxide synthase 2 Source HGNC Symbol Acc HGNC 9605
G03	SBH0543746	ENST00000638118.1	REN	ENSG00000143839	renin Source HGNC Symbol Acc HGNC 9958
G04	SBH0181986	ENST00000305352.6	S1PR1	ENSG00000170989	sphingosine-1-phosphate receptor 1 Source HGNC Symbol Acc HGNC 3165
G05	SBH0038875	ENST00000360168.7	SCNN1A	ENSG00000111319	sodium channel epithelial 1 alpha subunit Source HGNC Symbol Acc HGNC 10599
G06	SBH0196035	ENST00000566870.1	SCNN1B	ENSG00000168447	sodium channel epithelial 1 beta subunit Source HGNC Symbol Acc HGNC 10600
G07	SBH0294544	ENST00000300061.3	SCNN1G	ENSG00000166828	sodium channel epithelial 1 gamma subunit Source HGNC Symbol Acc HGNC 10602
G08	SBH0320193	ENST00000473577.1	SLC7A1	ENSG00000139514	solute carrier family 7 member 1 Source HGNC Symbol Acc HGNC 11057
G09	SBH1220421	ENST00000545180.5	SPHK1	ENSG00000176170	sphingosine kinase 1 Source NCBI gene Acc 8877
G10	SBH0272438	ENST00000340932.7	SPHK2	ENSG00000063176	sphingosine kinase 2 Source HGNC Symbol Acc HGNC 18859
G11	SBH0185323	ENST00000361696.9	UTS2	ENSG00000049247	urotensin 2 Source HGNC Symbol Acc HGNC 12636
G12	SBH0486948	ENST00000313135.3	UTS2R	ENSG00000181408	urotensin 2 receptor Source HGNC Symbol Acc HGNC 4468
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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