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

Human Skeletal Muscle: Myogenesis & Myopathy

Cat. no. 249950 SBHS-099ZA

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** for further details.

	1	2	3	4	5	6	7	8	9	10	11	12
A	ACTA1	ACTN3	ACVR2B	ADIPOQ	ADRB2	AGRN	AKT1	AKT2	ATP2A1	BCL2	BMP4	CAMK2G
B	CAPN2	CAPN3	CASP3	CAST	CAV1	CAV3	CRYAB	CS	CTNNB1	DAG1	DES	DMD
C	DMPK	DYSF	FBXO32	FGF2	FOXO1	FOXO3	HDAC5	HK2	IGF1	IGF2	IGFBP3	IGFBP5
D	IKBKB	IL1B	IL6	LEP	LMNA	MAPK1	MAPK14	MAPK3	MAPK8	MB	MEF2C	MMP9
E	MSTN	MUSK	MYF5	MYF6	MYH1	MYH2	MYOD1	MYOG	MYOT	NEB	NFKB1	NOS2
F	PAX3	PAX7	PDK4	PPARG	PPARGC1A	PPARGC1B	PPP3CA	PRKAA1	PRKAB2	PRKAG1	PRKAG3	RHOA
G	RPS6KB1	SGCA	SLC2A4	TGFB1	TNF	TNNC1	TNNI2	TNNT1	TNNT3	TRIM63	TTN	UTRN
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	SBH0515282	ENST00000366683.3	ACTA1	ENSG00000143632	actin, alpha 1, skeletal muscle Source HGNC Symbol Acc HGNC 129
A02	SBH0252637	ENST00000502692.5	ACTN3	ENSG00000248746	actinin alpha 3 (gene/pseudogene) Source HGNC Symbol Acc HGNC 165
A03	SBH0139190	ENST00000465020.5	ACVR2B	ENSG00000114739	activin A receptor type 2B Source HGNC Symbol Acc HGNC 174
A04	SBH1219727	ENST00000320741.7	ADIPOQ	ENSG00000181092	adiponectin, C1Q and collagen domain containing Source HGNC Symbol Acc HGNC 13633
A05	SBH0519738	ENST00000305988.5	ADRB2	ENSG00000169252	adrenoceptor beta 2 Source HGNC Symbol Acc HGNC 286
A06	SBH0261841	ENST00000620552.4	AGRN	ENSG00000188157	agrin Source HGNC Symbol Acc HGNC 329
A07	SBH0095396	ENST00000555528.5	AKT1	ENSG00000142208	AKT serine/threonine kinase 1 Source HGNC Symbol Acc HGNC 391
A08	SBH0364428	ENST00000492463.6	AKT2	ENSG00000105221	AKT serine/threonine kinase 2 Source HGNC Symbol Acc HGNC 392
A09	SBH0294439	ENST00000564732.1	ATP2A1	ENSG00000196296	ATPase sarcoplasmic/endoplasmic reticulum Ca2+ transporting 1 Source HGNC Symbol Acc HGNC 811
A10	SBH1219786	ENST00000398117.1	BCL2	ENSG00000171791	BCL2, apoptosis regulator Source HGNC Symbol Acc HGNC 990
A11	SBH0613995	ENST00000417573.5	BMP4	ENSG00000125378	bone morphogenetic protein 4 Source HGNC Symbol Acc HGNC 1071
A12	SBH0045953	ENST00000372765.5	CAMK2G	ENSG00000148660	calcium/calmodulin dependent protein kinase II gamma Source HGNC Symbol Acc HGNC 1463
B01	SBH0201957	ENST00000472601.5	CAPN2	ENSG00000162909	calpain 2 Source HGNC Symbol Acc HGNC 1479
B02	SBH0462377	ENST00000397200.8	CAPN3	ENSG00000092529	calpain 3 Source HGNC Symbol Acc HGNC 1480
B03	SBH1219824	ENST00000308394.9	CASP3	ENSG00000164305	caspase 3 Source HGNC Symbol Acc HGNC 1504
B04	SBH0451045	ENST00000309190.9	CAST	ENSG00000153113	calpastatin Source HGNC Symbol Acc HGNC 1515
B05	SBH0105254	ENST00000451122.5	CAV1	ENSG00000105974	caveolin 1 Source HGNC Symbol Acc HGNC 1527
B06	SBH0244733	ENST00000343849.2	CAV3	ENSG00000182533	caveolin 3 Source HGNC Symbol Acc HGNC 1529
B07	SBH0502900	ENST00000531198.5	CRYAB	ENSG00000109846	crystallin alpha B Source HGNC Symbol Acc HGNC 2389
B08	SBH0563059	ENST00000546930.5	CS	ENSG00000062485	citrate synthase Source HGNC Symbol Acc HGNC 2422
B09	SBH0588482	ENST00000396183.7	CTNNB1	ENSG00000168036	catenin beta 1 Source HGNC Symbol Acc HGNC 2514
B10	SBH0509463	ENST00000515359.6	DAG1	ENSG00000173402	dystroglycan 1 Source HGNC Symbol Acc HGNC 2666
B11	SBH0113006	ENST00000477226.5	DES	ENSG00000175084	desmin Source HGNC Symbol Acc HGNC 2770
B12	SBH0339261	ENST00000619831.4	DMD	ENSG00000198947	dystrophin Source HGNC Symbol Acc HGNC 2928
C01	SBH0391495	ENST00000343373.8	DMPK	ENSG00000104936	DM1 protein kinase Source HGNC Symbol Acc HGNC 2933
C02	SBH0310038	ENST00000413539.6	DYSF	ENSG00000135636	dysferlin Source HGNC Symbol Acc HGNC 3097
C03	SBH0093556	ENST00000521719.5	FBXO32	ENSG00000156804	F-box protein 32 Source HGNC Symbol Acc HGNC 16731
C04	SBH1220000	ENST00000264498.7	FGF2	ENSG00000138685	fibroblast growth factor 2 Source HGNC Symbol Acc HGNC 3676
C05	SBH0594989	ENST00000379561.6	FOXO1	ENSG00000150907	forkhead box O1 Source HGNC Symbol Acc HGNC 3819
C06	SBH0089051	ENST00000406360.2	FOXO3	ENSG00000118689	forkhead box O3 Source HGNC Symbol Acc HGNC 3821
C07	SBH0019397	ENST00000586802.5	HDAC5	ENSG00000108840	histone deacetylase 5 Source HGNC Symbol Acc HGNC 14068
C08	SBH0186371	ENST00000290573.6	HK2	ENSG00000159399	hexokinase 2 Source HGNC Symbol Acc HGNC 4923
C09	SBH1220091	ENST00000337514.10	IGF1	ENSG00000017427	insulin like growth factor 1 Source HGNC Symbol Acc HGNC 5464
C10	SBH0264962	ENST00000418738.2	IGF2	ENSG00000167244	insulin like growth factor 2 Source HGNC Symbol Acc HGNC 5466
		ENST00000275		ENSG00000	insulin like growth factor binding protein 3 Source HGNC Symbol Acc HGNC

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBH1220092	521.10	IGFBP3	146674	5472
C12	SBH1220094	ENST00000233813.5	IGFBP5	ENSG00000115461	insulin like growth factor binding protein 5 Source HGNC Symbol Acc HGNC 5474
D01	SBH0241248	ENST00000520810.6	IKBKB	ENSG00000104365	inhibitor of nuclear factor kappa B kinase subunit beta Source HGNC Symbol Acc HGNC 5960
D02	SBH0079231	ENST00000263341.6	IL1B	ENSG00000125538	interleukin 1 beta Source HGNC Symbol Acc HGNC 5992
D03	SBH1220111	ENST00000401630.7	IL6	ENSG00000136244	interleukin 6 Source HGNC Symbol Acc HGNC 6018
D04	SBH1220169	ENST00000308868.5	LEP	ENSG00000174697	leptin Source HGNC Symbol Acc HGNC 6553
D05	SBH0543296	ENST00000368299.7	LMNA	ENSG00000160789	lamin A/C Source HGNC Symbol Acc HGNC 6636
D06	SBH1220192	ENST00000544786.1	MAPK1	ENSG00000100030	mitogen-activated protein kinase 1 Source HGNC Symbol Acc HGNC 6871
D07	SBH0102441	ENST00000229795.7	MAPK14	ENSG00000112062	mitogen-activated protein kinase 14 Source HGNC Symbol Acc HGNC 6876
D08	SBH1220194	ENST00000478356.5	MAPK3	ENSG00000102882	mitogen-activated protein kinase 3 Source HGNC Symbol Acc HGNC 6877
D09	SBH0294318	ENST00000395611.7	MAPK8	ENSG00000107643	mitogen-activated protein kinase 8 Source HGNC Symbol Acc HGNC 6881
D10	SBH1220196	ENST00000443033.5	MB	ENSG00000198125	myoglobin Source HGNC Symbol Acc HGNC 6915
D11	SBH0475014	ENST00000625585.2	MEF2C	ENSG00000081189	myocyte enhancer factor 2C Source HGNC Symbol Acc HGNC 6996
D12	SBH0471278	ENST00000372330.3	MMP9	ENSG00000100985	matrix metallopeptidase 9 Source HGNC Symbol Acc HGNC 7176
E01	SBH0389766	ENST00000260950.4	MSTN	ENSG00000138379	myostatin Source HGNC Symbol Acc HGNC 4223
E02	SBH0494966	ENST00000416899.7	MUSK	ENSG00000030304	muscle associated receptor tyrosine kinase Source HGNC Symbol Acc HGNC 7525
E03	SBH0337017	ENST00000228644.4	MYF5	ENSG00000111049	myogenic factor 5 Source HGNC Symbol Acc HGNC 7565
E04	SBH0386677	ENST00000228641.4	MYF6	ENSG00000111046	myogenic factor 6 Source HGNC Symbol Acc HGNC 7566
E05	SBH0026734	ENST00000226207.6	MYH1	ENSG00000109061	myosin heavy chain 1 Source HGNC Symbol Acc HGNC 7567
E06	SBH0573662	ENST00000622564.4	MYH2	ENSG00000125414	myosin heavy chain 2 Source HGNC Symbol Acc HGNC 7572
E07	SBH0342665	ENST00000250003.4	MYOD1	ENSG00000129152	myogenic differentiation 1 Source HGNC Symbol Acc HGNC 7611
E08	SBH0426518	ENST00000241651.5	MYOG	ENSG00000122180	myogenin Source HGNC Symbol Acc HGNC 7612
E09	SBH0352894	ENST00000509812.5	MYOT	ENSG00000120729	myotilin Source HGNC Symbol Acc HGNC 12399
E10	SBH0057331	ENST00000604864.5	NEB	ENSG00000183091	nebulin Source HGNC Symbol Acc HGNC 7720
E11	SBH1220264	ENST00000651197.1	NFKB1	ENSG00000109320	nuclear factor kappa B subunit 1 Source HGNC Symbol Acc HGNC 7794
E12	SBH0408796	ENST00000313735.10	NOS2	ENSG00000007171	nitric oxide synthase 2 Source HGNC Symbol Acc HGNC 7873
F01	SBH0015205	ENST00000392070.6	PAX3	ENSG00000135903	paired box 3 Source HGNC Symbol Acc HGNC 8617
F02	SBH0593521	ENST00000375375.7	PAX7	ENSG00000009709	paired box 7 Source HGNC Symbol Acc HGNC 8621
F03	SBH1220295	ENST00000005178.6	PDK4	ENSG00000004799	pyruvate dehydrogenase kinase 4 Source HGNC Symbol Acc HGNC 8812
F04	SBH0521265	ENST00000652522.1	PPARG	ENSG00000132170	peroxisome proliferator activated receptor gamma Source HGNC Symbol Acc HGNC 9236
F05	SBH0648879	ENST00000506055.5	PPARGC1A	ENSG00000109819	PPARG coactivator 1 alpha Source HGNC Symbol Acc HGNC 9237
F06	SBH0295595	ENST00000309241.10	PPARGC1B	ENSG00000155846	PPARG coactivator 1 beta Source HGNC Symbol Acc HGNC 30022
F07	SBH0472618	ENST00000394854.8	PPP3CA	ENSG00000138814	protein phosphatase 3 catalytic subunit alpha Source HGNC Symbol Acc HGNC 9314
F08	SBH1220332	ENST00000397128.6	PRKAA1	ENSG00000132356	protein kinase AMP-activated catalytic subunit alpha 1 Source HGNC Symbol Acc HGNC 9376
F09	SBH0146629	ENST00000254101.4	PRKAB2	ENSG00000131791	protein kinase AMP-activated non-catalytic subunit beta 2 Source HGNC Symbol Acc HGNC 9379
F10	SBH0638541	ENST00000550125.5	PRKAG1	ENSG00000181929	protein kinase AMP-activated non-catalytic subunit gamma 1 Source HGNC Symbol Acc HGNC 9385

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBH0373404	ENST00000430489.1	PRKAG3	ENSG00000115592	protein kinase AMP-activated non-catalytic subunit gamma 3 Source HGNC Symbol Acc HGNC 9387
F12	SBH1220367	ENST00000418115.6	RHOA	ENSG00000067560	ras homolog family member A Source HGNC Symbol Acc HGNC 667
G01	SBH1220379	ENST00000406116.7	RPS6KB1	ENSG00000108443	ribosomal protein S6 kinase B1 Source HGNC Symbol Acc HGNC 10436
G02	SBH0463232	ENST00000262018.8	SGCA	ENSG00000108823	sarcoglycan alpha Source HGNC Symbol Acc HGNC 10805
G03	SBH0509274	ENST00000424875.2	SLC2A4	ENSG00000181856	solute carrier family 2 member 4 Source HGNC Symbol Acc HGNC 11009
G04	SBH1220443	ENST00000598758.5	TGFB1	ENSG00000105329	transforming growth factor beta 1 Source NCBI gene Acc 7040
G05	SBH1220471	ENST00000449264.3	TNF	ENSG00000232810	tumor necrosis factor Source HGNC Symbol Acc HGNC 11892
G06	SBH0179303	ENST00000461086.1	TNNC1	ENSG00000114854	troponin C1, slow skeletal and cardiac type Source HGNC Symbol Acc HGNC 11943
G07	SBH0580534	ENST00000381906.5	TNNI2	ENSG00000130598	troponin I2, fast skeletal type Source HGNC Symbol Acc HGNC 11946
G08	SBH0332854	ENST00000587758.5	TNNT1	ENSG00000105048	troponin T1, slow skeletal type Source HGNC Symbol Acc HGNC 11948
G09	SBH0517414	ENST00000381558.6	TNNT3	ENSG00000130595	troponin T3, fast skeletal type Source HGNC Symbol Acc HGNC 11950
G10	SBH0549099	ENST00000374272.3	TRIM63	ENSG00000158022	tripartite motif containing 63 Source HGNC Symbol Acc HGNC 16007
G11	SBH1220495	ENST00000615779.5	TTN	ENSG00000155657	titin Source HGNC Symbol Acc HGNC 12403
G12	SBH0548996	ENST00000367524.7	UTRN	ENSG00000152818	utrophin Source HGNC Symbol Acc HGNC 12635
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 µl reactions: 20 µl 8x gDNA Removal Mix, 10 µl Reverse Transcription Enzyme, 40 µl Reverse Transcription Mix (containing RT primers), 20 µl Internal Control RNA, 1.9 ml RNase-Free Water	205410
QuantiNova SYBR Green RT-PCR Kit (100)*	For 100 x 20 µl reactions: 1 ml QuantiNova SYBR Green RT-PCR Master Mix, 20 µl QuantiNova SYBR Green RT Mix, 20 µl Internal Control RNA, 500 µl Yellow Template Dilution Buffer, 250 µl ROX Reference Dye, 1.9 µl RNase-Free Water	208152
QuantiNova SYBR Green PCR Kit (100)*	For 100 x 20 µl reactions: 1 ml 2x QuantiNova SYBR Green PCR Master Mix, 500 µl QuantiNova Yellow Template Dilution Buffer, 250 µl 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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