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

Human Skeletal Muscle: Myogenesis & Myopathy

Cat. no. 249955 UPHS-099ZA

For study focus gene expression analysis

Shipping and storage

QuantiNova LNA Probe PCR Focus Panels are shipped at room temperature. Immediately upon receipt, they should be stored protected from light 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 Probe PCR Focus Panels should be used together with the QuantiNova Reverse Transcription Kit for cDNA synthesis and the QuantiNova Probe PCR Kit (Mastermix) for PCR.

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

For the 384-well (4 × 96) PCR panels, genes are present in a staggered format. Refer to the QuantiNova LNA Probe PCR 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 Probe PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	UPFH0475324	ENST00000366683.3	ACTA1	ENSG00000143632	actin, alpha 1, skeletal muscle Source HGNC Symbol Acc HGNC 129
A02	UPFH0531688	ENST00000513398.2	ACTN3	ENSG00000248746	actinin alpha 3 (gene/pseudogene) Source HGNC Symbol Acc HGNC 165
A03	UPFH0530854	ENST00000352511.5	ACVR2B	ENSG00000114739	activin A receptor type 2B Source HGNC Symbol Acc HGNC 174
A04	UPFH1132772	ENST00000320741.7	ADIPOQ	ENSG00000181092	adiponectin, C1Q and collagen domain containing Source HGNC Symbol Acc HGNC 13633
A05	UPFH0552004	ENST00000305988.5	ADRB2	ENSG00000169252	adrenoceptor beta 2 Source HGNC Symbol Acc HGNC 286
A06	UPFH0255020	ENST00000620552.4	AGRN	ENSG00000188157	agrin Source HGNC Symbol Acc HGNC 329
A07	UPFH0453992	ENST00000555528.5	AKT1	ENSG00000142208	AKT serine/threonine kinase 1 Source HGNC Symbol Acc HGNC 391
A08	UPFH0246744	ENST00000441941.6	AKT2	ENSG00000105221	AKT serine/threonine kinase 2 Source HGNC Symbol Acc HGNC 392
A09	UPFH0315723	ENST00000562185.5	ATP2A1	ENSG00000196296	ATPase sarcoplasmic/endoplasmic reticulum Ca2+ transporting 1 Source HGNC Symbol Acc HGNC 811
A10	UPFH1132900	ENST00000333681.5	BCL2	ENSG00000171791	BCL2, apoptosis regulator Source HGNC Symbol Acc HGNC 990
A11	UPFH0443169	ENST00000558984.1	BMP4	ENSG00000125378	bone morphogenetic protein 4 Source HGNC Symbol Acc HGNC 1071
A12	UPFH0501608	ENST00000423381.5	CAMK2G	ENSG00000148660	calcium/calmodulin dependent protein kinase II gamma Source HGNC Symbol Acc HGNC 1463
B01	UPFH0544717	ENST00000433674.6	CAPN2	ENSG00000162909	calpain 2 Source HGNC Symbol Acc HGNC 1479
B02	UPFH0273772	ENST00000356316.7	CAPN3	ENSG00000092529	calpain 3 Source HGNC Symbol Acc HGNC 1480
B03	UPFH1132892	ENST00000523916.5	CASP3	ENSG00000164305	caspase 3 Source HGNC Symbol Acc HGNC 1504
B04	UPFH0289501	ENST00000510500.5	CAST	ENSG00000153113	calpastatin Source HGNC Symbol Acc HGNC 1515
B05	UPFH0192343	ENST00000393468.1	CAV1	ENSG00000105974	caveolin 1 Source HGNC Symbol Acc HGNC 1527
B06	UPFH0013779	ENST00000397368.2	CAV3	ENSG00000182533	caveolin 3 Source HGNC Symbol Acc HGNC 1529
B07	UPFH0205096	ENST00000527950.5	CRYAB	ENSG00000109846	crystallin alpha B Source HGNC Symbol Acc HGNC 2389
B08	UPFH1132337	ENST00000549221.5	CS	ENSG00000062485	citrate synthase Source HGNC Symbol Acc HGNC 2422
B09	UPFH0097734	ENST00000396183.7	CTNNB1	ENSG00000168036	catenin beta 1 Source HGNC Symbol Acc HGNC 2514
B10	UPFH0307881	ENST00000479935.1	DAG1	ENSG00000173402	dystroglycan 1 Source HGNC Symbol Acc HGNC 2666
B11	UPFH0404526	ENST00000492726.1	DES	ENSG00000175084	desmin Source HGNC Symbol Acc HGNC 2770
B12	UPFH0041524	ENST00000378680.6	DMD	ENSG00000198947	dystrophin Source HGNC Symbol Acc HGNC 2928
C01	UPFH0451445	ENST00000291270.8	DMPK	ENSG00000104936	DM1 protein kinase Source HGNC Symbol Acc HGNC 2933
C02	UPFH0236993	ENST00000409762.5	DYSF	ENSG00000135636	dysferlin Source HGNC Symbol Acc HGNC 3097
C03	UPFH0454509	ENST00000443022.2	FBXO32	ENSG00000156804	F-box protein 32 Source HGNC Symbol Acc HGNC 16731
C04	UPFH0613093	ENST00000264498.7	FGF2	ENSG00000138685	fibroblast growth factor 2 Source HGNC Symbol Acc HGNC 3676
C05	UPFH0401417	ENST00000379561.6	FOXO1	ENSG00000150907	forkhead box O1 Source HGNC Symbol Acc HGNC 3819
C06	UPFH0442611	ENST00000540898.1	FOXO3	ENSG00000118689	forkhead box O3 Source HGNC Symbol Acc HGNC 3821
C07	UPFH1132439	ENST00000225983.10	HDAC5	ENSG00000108840	histone deacetylase 5 Source HGNC Symbol Acc HGNC 14068
C08	UPFH1132910	ENST00000409174.1	HK2	ENSG00000159399	hexokinase 2 Source HGNC Symbol Acc HGNC 4923
C09	UPFH0229443	ENST00000337514.10	IGF1	ENSG00000017427	insulin like growth factor 1 Source HGNC Symbol Acc HGNC 5464
C10	UPFH0479939	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	UPFH1132893	521.10	IGFBP3	146674	5472
C12	UPFH1132475	ENST00000449583.1	IGFBP5	ENSG00000115461	insulin like growth factor binding protein 5 Source HGNC Symbol Acc HGNC 5474
D01	UPFH0596293	ENST00000649612.2	IKBKB	ENSG00000104365	inhibitor of nuclear factor kappa B kinase subunit beta Source HGNC Symbol Acc HGNC 5960
D02	UPFH0163764	ENST00000263341.6	IL1B	ENSG00000125538	interleukin 1 beta Source HGNC Symbol Acc HGNC 5992
D03	UPFH1172910	ENST00000258743.10	IL6	ENSG00000136244	interleukin 6 Source HGNC Symbol Acc HGNC 6018
D04	UPFH1132519	ENST00000308868.5	LEP	ENSG00000174697	leptin Source HGNC Symbol Acc HGNC 6553
D05	UPFH0218092	ENST00000368299.7	LMNA	ENSG00000160789	lamin A/C Source HGNC Symbol Acc HGNC 6636
D06	UPFH0366815	ENST00000215832.10	MAPK1	ENSG00000100030	mitogen-activated protein kinase 1 Source HGNC Symbol Acc HGNC 6871
D07	UPFH0068247	ENST00000229795.7	MAPK14	ENSG00000112062	mitogen-activated protein kinase 14 Source HGNC Symbol Acc HGNC 6876
D08	UPFH1132534	ENST00000481230.1	MAPK3	ENSG00000102882	mitogen-activated protein kinase 3 Source HGNC Symbol Acc HGNC 6877
D09	UPFH1132535	ENST00000374179.8	MAPK8	ENSG00000107643	mitogen-activated protein kinase 8 Source HGNC Symbol Acc HGNC 6881
D10	UPFH0441488	ENST00000406324.5	MB	ENSG00000198125	myoglobin Source HGNC Symbol Acc HGNC 6915
D11	UPFH0170268	ENST00000424173.6	MEF2C	ENSG00000081189	myocyte enhancer factor 2C Source HGNC Symbol Acc HGNC 6996
D12	UPFH0367626	ENST00000372330.3	MMP9	ENSG00000100985	matrix metallopeptidase 9 Source HGNC Symbol Acc HGNC 7176
E01	UPFH0218466	ENST00000260950.4	MSTN	ENSG00000138379	myostatin Source HGNC Symbol Acc HGNC 4223
E02	UPFH0039720	ENST00000374439.1	MUSK	ENSG00000030304	muscle associated receptor tyrosine kinase Source HGNC Symbol Acc HGNC 7525
E03	UPFH0154332	ENST00000228644.4	MYF5	ENSG00000111049	myogenic factor 5 Source HGNC Symbol Acc HGNC 7565
E04	UPFH0129976	ENST00000228641.4	MYF6	ENSG00000111046	myogenic factor 6 Source HGNC Symbol Acc HGNC 7566
E05	UPFH0414024	ENST00000226207.6	MYH1	ENSG00000109061	myosin heavy chain 1 Source HGNC Symbol Acc HGNC 7567
E06	UPFH0514635	ENST00000622564.4	MYH2	ENSG00000125414	myosin heavy chain 2 Source HGNC Symbol Acc HGNC 7572
E07	UPFH0179986	ENST00000250003.4	MYOD1	ENSG00000129152	myogenic differentiation 1 Source HGNC Symbol Acc HGNC 7611
E08	UPFH0431959	ENST00000241651.5	MYOG	ENSG00000122180	myogenin Source HGNC Symbol Acc HGNC 7612
E09	UPFH0356376	ENST00000421631.6	MYOT	ENSG00000120729	myotilin Source HGNC Symbol Acc HGNC 12399
E10	UPFH0247656	ENST00000424585.1	NEB	ENSG00000183091	nebulin Source HGNC Symbol Acc HGNC 7720
E11	UPFH1132828	ENST00000226574.9	NFKB1	ENSG00000109320	nuclear factor kappa B subunit 1 Source HGNC Symbol Acc HGNC 7794
E12	UPFH0572128	ENST00000313735.10	NOS2	ENSG00000007171	nitric oxide synthase 2 Source HGNC Symbol Acc HGNC 7873
F01	UPFH0068342	ENST00000647467.1	PAX3	ENSG00000135903	paired box 3 Source HGNC Symbol Acc HGNC 8617
F02	UPFH0588961	ENST00000400661.3	PAX7	ENSG00000009709	paired box 7 Source HGNC Symbol Acc HGNC 8621
F03	UPFH1132611	ENST00000005178.6	PDK4	ENSG00000004799	pyruvate dehydrogenase kinase 4 Source HGNC Symbol Acc HGNC 8812
F04	UPFH0284890	ENST00000477039.5	PPARG	ENSG00000132170	peroxisome proliferator activated receptor gamma Source HGNC Symbol Acc HGNC 9236
F05	UPFH0403608	ENST00000264867.7	PPARGC1A	ENSG00000109819	PPARG coactivator 1 alpha Source HGNC Symbol Acc HGNC 9237
F06	UPFH0004689	ENST00000394320.7	PPARGC1B	ENSG00000155846	PPARG coactivator 1 beta Source HGNC Symbol Acc HGNC 30022
F07	UPFH0410648	ENST00000394854.8	PPP3CA	ENSG00000138814	protein phosphatase 3 catalytic subunit alpha Source HGNC Symbol Acc HGNC 9314
F08	UPFH0363221	ENST00000397128.6	PRKAA1	ENSG00000132356	protein kinase AMP-activated catalytic subunit alpha 1 Source HGNC Symbol Acc HGNC 9376
F09	UPFH0607399	ENST00000474939.1	PRKAB2	ENSG00000131791	protein kinase AMP-activated non-catalytic subunit beta 2 Source HGNC Symbol Acc HGNC 9379
F10	UPFH0066787	ENST00000548065.6	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	UPFH0385179	ENST00000490971.1	PRKAG3	ENSG00000115592	protein kinase AMP-activated non-catalytic subunit gamma 3 Source HGNC Symbol Acc HGNC 9387
F12	UPFH1132657	ENST00000445425.4	RHOA	ENSG00000067560	ras homolog family member A Source HGNC Symbol Acc HGNC 667
G01	UPFH1132665	ENST00000406116.7	RPS6KB1	ENSG00000108443	ribosomal protein S6 kinase B1 Source HGNC Symbol Acc HGNC 10436
G02	UPFH0100060	ENST00000513821.5	SGCA	ENSG00000108823	sarcoglycan alpha Source HGNC Symbol Acc HGNC 10805
G03	UPFH0163622	ENST00000317370.12	SLC2A4	ENSG00000181856	solute carrier family 2 member 4 Source HGNC Symbol Acc HGNC 11009
G04	UPFH0193430	ENST00000221930.5	TGFB1	ENSG00000105329	transforming growth factor beta 1 Source NCBI gene Acc 7040
G05	UPFH1132978	ENST00000449264.3	TNF	ENSG00000232810	tumor necrosis factor Source HGNC Symbol Acc HGNC 11892
G06	UPFH0151260	ENST00000461086.1	TNNC1	ENSG00000114854	troponin C1, slow skeletal and cardiac type Source HGNC Symbol Acc HGNC 11943
G07	UPFH0048380	ENST00000252898.11	TNNI2	ENSG00000130598	troponin I2, fast skeletal type Source HGNC Symbol Acc HGNC 11946
G08	UPFH0265817	ENST00000536926.5	TNNT1	ENSG00000105048	troponin T1, slow skeletal type Source HGNC Symbol Acc HGNC 11948
G09	UPFH0069299	ENST00000381558.6	TNNT3	ENSG00000130595	troponin T3, fast skeletal type Source HGNC Symbol Acc HGNC 11950
G10	UPFH0214232	ENST00000374272.3	TRIM63	ENSG00000158022	tripartite motif containing 63 Source HGNC Symbol Acc HGNC 16007
G11	UPFH1132742	ENST00000591111.5	TTN	ENSG00000155657	titin Source HGNC Symbol Acc HGNC 12403
G12	UPFH0129937	ENST00000367524.7	UTRN	ENSG00000152818	utrophin Source HGNC Symbol Acc HGNC 12635
H01	UPFH1132936	ENST00000646664.1	ACTB	ENSG00000075624	actin beta Source HGNC Symbol Acc HGNC 132
H02	UPFH1132937	ENST00000544417.5	B2M	ENSG00000166710	beta-2-microglobulin Source HGNC Symbol Acc HGNC 914
H03	UPFH1132938	ENST00000229239.10	GAPDH	ENSG00000111640	glyceraldehyde-3-phosphate dehydrogenase Source HGNC Symbol Acc HGNC 4141
H04	UPFH1132939	ENST00000298556.8	HPRT1	ENSG00000165704	hypoxanthine phosphoribosyltransferase 1 Source HGNC Symbol Acc HGNC 5157
H05	UPFH1132941	ENST00000392514.9	RPLP0	ENSG00000089157	ribosomal protein lateral stalk subunit P0 Source HGNC Symbol Acc HGNC 10371
H06	UPFH1126608	UPL_HGDC	HGDC	UPL_HGDC	Human Genomic DNA Contamination
H07	UPFH1126606	UPL_QIC	QIC	UPL_QIC	QuantiNova Internal Control
H08	UPFH1126606	UPL_QIC	QIC	UPL_QIC	QuantiNova Internal Control
H09	UPFH1126606	UPL_QIC	QIC	UPL_QIC	QuantiNova Internal Control
H10	UPFH1126605	UPL_PPC	PPC	UPL_PPC	Positive PCR Control
H11	UPFH1126605	UPL_PPC	PPC	UPL_PPC	Positive PCR Control
H12	UPFH1126605	UPL_PPC	PPC	UPL_PPC	Positive PCR Control

Related products

Product	Contents	Cat. no.
QuantiNova LNA Probe PCR QC Panel	These panels are designed to assess the quality of RNA samples before characterization using QuantiNova LNA Probe PCR Focus Panels; available in 96-well, 384-well, and Rotor-Disc 100 formats	249945
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 Probe RT-PCR Kit (100)*	For 100 x 20 µl reactions: 1 ml QuantiNova Probe RT-PCR Master Mix, 20 µl QuantiNova Probe RT Mix, 20 µl Internal Control RNA, 500 µl Yellow Template Dilution Buffer, 250 µl ROX Reference Dye, 1.9 µl RNase-Free Water	208352
QuantiNova Probe PCR Kit (100)*	For 100 x 20 µl reactions: 1 ml 2x QuantiNova Probe PCR Master Mix, 500 µl QuantiNova Yellow Template Dilution Buffer, 250 µl QN ROX Reference Dye, 1.9 ml Water	208252

*Larger kit sizes available.

The QuantiNova LNA Probe 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 or can be requested from QIAGEN Technical Services or your local distributor.