

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

## Rat Skeletal Muscle: Myogenesis & Myopathy

Cat. no. 249950 SBRN-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](http://www.qiagen.com) for further details.

	1	2	3	4	5	6	7	8	9	10	11	12
<b>A</b>	Acta1	Actn3	Acvr2b	Adipoq	Adrb2	Agrn	Akt1	Akt2	AABR0700577 5.1	Bcl2	Bmp4	Camk2g
<b>B</b>	Capn2	Capn3	Casp3	Cast	Cav1	Cav3	Cryab	Cs	Clnnb1	Dag1	Des	Dmd
<b>C</b>	Dmpk	Dysf	Emd	Fbxo32	Fgf2	Foxo3	Hdac5	Hk2	Igf1	Igf2	Igfbp3	Igfbp5
<b>D</b>	Ikbbk	Il1b	Il6	Lep	Lmna	Mapk1	Mapk14	Mapk3	Mapk8	Mb	Mbnl1	Mef2c
<b>E</b>	Mmp9	Mstn	Musk	Myf5	Myf6	Myh3	Myh1	Myod1	Myog	LOC1009097 61	Neb	Nfkab1
<b>F</b>	Nos2	Pax3	Pdk4	Pparg	Ppargc1a	Ppargc1b	Ppp3ca	Prkaa1	Prkab2	Kmt2d	Prkag3	Rhoa
<b>G</b>	Rps6kb1	Sgca	Slc2a4	Tgfb1	LOC1036943 80	Tnnc1	Tnni2	Tnnt1	Tnnt3	Trim63	AABR0705258 5.1	Utrn
<b>H</b>	Actb	B2m	Hprt1	Ldha	Rplp1	RGDC	QIC	QIC	QIC	PPC	PPC	PPC

## Gene table: QuantiNova LNA PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	SBR1093875	ENSRNOT00000024084.6	Acta1	ENSRNOG0000017786	actin, alpha 1, skeletal muscle Source RGD Symbol Acc 2025
A02	SBR1122331	ENSRNOT00000026812.5	Actn3	ENSRNOG0000019745	actinin alpha 3 Source RGD Symbol Acc 621792
A03	SBR1183710	ENSRNOT00000019777.6	Acvr2b	ENSRNOG0000014477	activin A receptor type 2B Source RGD Symbol Acc 2028
A04	SBR1209814	ENSRNOT00000002492.5	Adipoq	ENSRNOG0000001821	adiponectin, C1Q and collagen domain containing Source RGD Symbol Acc 628748
A05	SBR1208091	ENSRNOT00000026098.3	Adrb2	ENSRNOG0000019217	adrenoceptor beta 2 Source RGD Symbol Acc 2060
A06	SBR1126942	ENSRNOT00000045678.5	Agri	ENSRNOG0000020205	agrin Source RGD Symbol Acc 2067
A07	SBR1163078	ENSRNOT00000031164.3	Akt1	ENSRNOG0000028629	AKT serine/threonine kinase 1 Source RGD Symbol Acc 2081
A08	SBR1190995	ENSRNOT00000025303.3	Akt2	ENSRNOG0000018677	AKT serine/threonine kinase 2 Source RGD Symbol Acc 2082
A09	SBR1150917	ENSRNOT00000074778.2	AABR07005775.1	ENSRNOG0000047124	
A10	SBR1170984	ENSRNOT00000003768.2	Bcl2	ENSRNOG0000002791	BCL2, apoptosis regulator Source RGD Symbol Acc 2199
A11	SBR1132271	ENSRNOT00000012957.6	Bmp4	ENSRNOG0000009694	bone morphogenetic protein 4 Source RGD Symbol Acc 2213
A12	SBR1200638	ENSRNOT00000065644.4	Camk2g	ENSRNOG0000009783	calcium/calmodulin-dependent protein kinase II gamma Source RGD Symbol Acc 621802
B01	SBR1117892	ENSRNOT00000045326.3	Capn2	ENSRNOG0000034015	calpain 2 Source RGD Symbol Acc 2268
B02	SBR1202318	ENSRNOT00000011761.6	Capn3	ENSRNOG0000008609	calpain 3 Source RGD Symbol Acc 2269
B03	SBR1123217	ENSRNOT00000014095.5	Casp3	ENSRNOG0000010475	caspase 3 Source RGD Symbol Acc 2275
B04	SBR1159461	ENSRNOT00000062052.4	Cast	ENSRNOG0000010286	calpastatin Source RGD Symbol Acc 2278
B05	SBR1108638	ENSRNOT00000078250.1	Cav1	ENSRNOG0000056836	caveolin 1 Source RGD Symbol Acc 2280
B06	SBR1199258	ENSRNOT00000007601.4	Cav3	ENSRNOG0000005798	caveolin 3 Source RGD Symbol Acc 2281
B07	SBR1151967	ENSRNOT00000059127.3	Cryab	ENSRNOG0000010524	crystallin, alpha B Source RGD Symbol Acc 2414
B08	SBR1131298	ENSRNOT00000033726.5	Cs	ENSRNOG0000023520	citrate synthase Source RGD Symbol Acc 620330
B09	SBR1143136	ENSRNOT00000079085.1	Ctlnb1	ENSRNOG0000054172	catenin beta 1 Source RGD Symbol Acc 70487
B10	SBR1190427	ENSRNOT00000026327.7	Dag1	ENSRNOG0000019400	dystroglycan 1 Source RGD Symbol Acc 621890
B11	SBR1181738	ENSRNOT00000026860.4	Des	ENSRNOG0000019810	desmin Source RGD Symbol Acc 620686
B12	SBR1107783	ENSRNOT00000035692.6	Dmd	ENSRNOG0000046366	dystrophin Source RGD Symbol Acc 2507
C01	SBR1144737	ENSRNOT00000020428.8	Dmpk	ENSRNOG0000015085	DM1 protein kinase Source RGD Symbol Acc 1309825
C02	SBR1209778	ENSRNOT00000085765.1	Dysf	ENSRNOG0000032788	dysferlin Source RGD Symbol Acc 1311023
C03	SBR1108920	ENSRNOT00000080990.1	Emd	ENSRNOG0000058882	emerin Source RGD Symbol Acc 2551
C04	SBR1146087	ENSRNOT00000010361.3	Fbxo32	ENSRNOG0000006738	F-box protein 32 Source RGD Symbol Acc 620373
C05	SBR1185708	ENSRNOT00000023388.5	Fgf2	ENSRNOG0000017392	fibroblast growth factor 2 Source RGD Symbol Acc 2609
C06	SBR1161322	ENSRNOT00000000327.5	Foxo3	ENSRNOG0000000299	forkhead box O3 Source RGD Symbol Acc 1309196
C07	SBR1210339	ENSRNOT00000055187.4	Hdac5	ENSRNOG0000020905	histone deacetylase 5 Source RGD Symbol Acc 619980
C08	SBR1148823	ENSRNOT00000008813.3	Hk2	ENSRNOG0000006116	hexokinase 2 Source RGD Symbol Acc 2797
C09	SBR1185495	ENSRNOT00000038780.6	Igf1	ENSRNOG0000004517	insulin-like growth factor 1 Source RGD Symbol Acc 2868
C10	SBR1106101	ENSRNOT00000050760.3	Igf2	ENSRNOG0000020369	insulin-like growth factor 2 Source RGD Symbol Acc 2870
		ENSRNOT000000		ENSRNOG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBR1152057	088355.1	Igfbp3	000061910	insulin-like growth factor binding protein 3 Source RGD Symbol Acc 2874
C12	SBR1137301	ENSRNOT00000 079493.1	Igfbp5	ENSRNOG00 000017206	insulin-like growth factor binding protein 5 Source RGD Symbol Acc 2876
D01	SBR1133299	ENSRNOT00000 025851.4	Ikbkb	ENSRNOG00 000019073	inhibitor of nuclear factor kappa B kinase subunit beta Source RGD Symbol Acc 621375
D02	SBR1196387	ENSRNOT00000 006308.4	Il1b	ENSRNOG00 000004649	interleukin 1 beta Source RGD Symbol Acc 2891
D03	SBR1156877	ENSRNOT00000 013732.6	Il6	ENSRNOG00 000010278	interleukin 6 Source RGD Symbol Acc 2901
D04	SBR1209536	ENSRNOT00000 071926.1	Lep	ENSRNOG00 000045797	leptin Source RGD Symbol Acc 3000
D05	SBR1110172	ENSRNOT00000 082174.1	Lmna	ENSRNOG00 000019638	lamin A/C Source RGD Symbol Acc 620456
D06	SBR1202944	ENSRNOT00000 002533.7	Mapk1	ENSRNOG00 000001849	mitogen activated protein kinase 1 Source RGD Symbol Acc 70500
D07	SBR1149566	ENSRNOT00000 000618.6	Mapk14	ENSRNOG00 000000513	mitogen activated protein kinase 14 Source RGD Symbol Acc 70496
D08	SBR1209281	ENSRNOT00000 087625.1	Mapk3	ENSRNOG00 000053583	mitogen activated protein kinase 3 Source RGD Symbol Acc 3046
D09	SBR1144517	ENSRNOT00000 065216.3	Mapk8	ENSRNOG00 000020155	mitogen-activated protein kinase 8 Source RGD Symbol Acc 621506
D10	SBR1179220	ENSRNOT00000 006184.6	Mb	ENSRNOG00 000004583	myoglobin Source RGD Symbol Acc 620411
D11	SBR1119948	ENSRNOT00000 036808.5	Mbnl1	ENSRNOG00 000014076	muscleblind-like splicing regulator 1 Source RGD Symbol Acc 628668
D12	SBR1120063	ENSRNOT00000 076710.2	Mef2c	ENSRNOG00 000033134	myocyte enhancer factor 2C Source RGD Symbol Acc 1563119
E01	SBR1206750	ENSRNOT00000 023965.3	Mmp9	ENSRNOG00 000017539	matrix metalloproteinase 9 Source RGD Symbol Acc 621320
E02	SBR1131840	ENSRNOT00000 038093.3	Mstn	ENSRNOG00 000021294	myostatin Source RGD Symbol Acc 3115
E03	SBR1136283	ENSRNOT00000 048457.5	Musk	ENSRNOG00 000033567	muscle associated receptor tyrosine kinase Source RGD Symbol Acc 3211
E04	SBR1170076	ENSRNOT00000 006453.5	Myf5	ENSRNOG00 000004768	myogenic factor 5 Source RGD Symbol Acc 1308322
E05	SBR1130853	ENSRNOT00000 006523.5	Myf6	ENSRNOG00 000004878	myogenic factor 6 Source RGD Symbol Acc 3134
E06	SBR1178113	ENSRNOT00000 004147.5	Myh3	ENSRNOG00 000046276	myosin heavy chain 3 Source RGD Symbol Acc 3138
E07	SBR1208966	ENSRNOT00000 086599.1	Myh1	ENSRNOG00 000049695	myosin heavy chain 1 Source RGD Symbol Acc 735061
E08	SBR1143996	ENSRNOT00000 015109.2	Myod1	ENSRNOG00 000011306	myogenic differentiation 1 Source RGD Symbol Acc 631429
E09	SBR1120806	ENSRNOT00000 042046.1	Myog	ENSRNOG00 000030743	myogenin Source RGD Symbol Acc 620432
E10	SBR1103677	ENSRNOT00000 093356.1	LOC10090 9761	ENSRNOG00 000047186	mytilin-like Source RGD Symbol Acc 6487654
E11	SBR1147136	ENSRNOT00000 076095.2	Neb	ENSRNOG00 000006783	nebulin Source RGD Symbol Acc 1311134
E12	SBR1111134	ENSRNOT00000 036838.4	Nfkb1	ENSRNOG00 000023258	nuclear factor kappa B subunit 1 Source RGD Symbol Acc 70498
F01	SBR1197401	ENSRNOT00000 073138.2	Nos2	ENSRNOG00 000057443	similar to Nitric oxide synthase, inducible (NOS type II) (Inducible NO synthase) (Inducible NOS) (iNOS) Source RGD Symbol Acc 1598227
F02	SBR1151181	ENSRNOT00000 018652.5	Pax3	ENSRNOG00 000013670	paired box 3 Source RGD Symbol Acc 620431
F03	SBR1096444	ENSRNOT00000 012760.4	Pdk4	ENSRNOG00 000009565	pyruvate dehydrogenase kinase 4 Source RGD Symbol Acc 69061
F04	SBR1131520	ENSRNOT00000 082969.1	Pparg	ENSRNOG00 000008839	peroxisome proliferator-activated receptor gamma Source RGD Symbol Acc 3371
F05	SBR1191958	ENSRNOT00000 006071.5	Ppargc1a	ENSRNOG00 000004473	PPARG coactivator 1 alpha Source RGD Symbol Acc 620925
F06	SBR1109181	ENSRNOT00000 066048.3	Ppargc1b	ENSRNOG00 000017503	PPARG coactivator 1 beta Source RGD Symbol Acc 727948
F07	SBR1162958	ENSRNOT00000 047975.5	Ppp3ca	ENSRNOG00 000009882	protein phosphatase 3 catalytic subunit alpha Source RGD Symbol Acc 3382
F08	SBR1120460	ENSRNOT00000 017626.5	Prkaa1	ENSRNOG00 000012799	protein kinase AMP-activated catalytic subunit alpha 1 Source RGD Symbol Acc 3387
F09	SBR1188517	ENSRNOT00000 063783.2	Prkab2	ENSRNOG00 000018166	protein kinase AMP-activated non-catalytic subunit beta 2 Source RGD Symbol Acc 620905
F10	SBR1161274	ENSRNOT00000 083354.1	Kmt2d	ENSRNOG00 000061499	protein kinase AMP-activated non-catalytic subunit gamma 1 Source RGD Symbol Acc 3388

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBR1122356	ENSRNOT00000023365.5	Prkag3	ENSRNOG0000017248	protein kinase AMP-activated non-catalytic subunit gamma 3 Source RGD Symbol Acc 1308698
F12	SBR1125110	ENSRNOT00000071664.2	Rhoa	ENSRNOG0000050519	ras homolog family member A Source RGD Symbol Acc 619921
G01	SBR1105085	ENSRNOT00000005226.4	Rps6kb1	ENSRNOG0000003919	ribosomal protein S6 kinase B1 Source RGD Symbol Acc 620683
G02	SBR1118378	ENSRNOT00000005381.6	Sgca	ENSRNOG0000003998	sarcoglycan, alpha Source RGD Symbol Acc 1308062
G03	SBR1096562	ENSRNOT00000023256.5	Slc2a4	ENSRNOG0000017226	solute carrier family 2 member 4 Source RGD Symbol Acc 2711
G04	SBR1143485	ENSRNOT00000028051.4	Tgfb1	ENSRNOG0000020652	transforming growth factor, beta 1 Source RGD Symbol Acc 69051
G05	SBR1187845	ENSRNOT00000079677.1	LOC103694380	ENSRNOG0000055156	tumor necrosis factor-like Source RGD Symbol Acc 9404643
G06	SBR1160479	ENSRNOT00000025606.6	Tnnc1	ENSRNOG0000018943	troponin C1, slow skeletal and cardiac type Source RGD Symbol Acc 1309921
G07	SBR1169272	ENSRNOT00000027487.7	Tnni2	ENSRNOG0000020276	troponin I2, fast skeletal type Source RGD Symbol Acc 62050
G08	SBR1098437	ENSRNOT00000058843.5	Tnnt1	ENSRNOG0000028041	troponin T1, slow skeletal type Source RGD Symbol Acc 621852
G09	SBR1142583	ENSRNOT00000040598.5	Tnnt3	ENSRNOG0000020332	troponin T3, fast skeletal type Source RGD Symbol Acc 3883
G10	SBR1151468	ENSRNOT00000067524.3	Trim63	ENSRNOG0000016543	tripartite motif containing 63 Source RGD Symbol Acc 619964
G11	SBR1197000	ENSRNOT00000030978.2	AABR07052585.1	ENSRNOG0000022637	
G12	SBR1094352	ENSRNOT00000016273.5	Utrn	ENSRNOG0000011058	utrophin Source RGD Symbol Acc 3947
H01	SBR1220567	ENSRNOT00000042459.4	Actb	ENSRNOG0000034254	actin, beta Source RGD Symbol Acc 628837
H02	SBR1220568	ENSRNOT00000023017.5	B2m	ENSRNOG0000017123	beta-2 microglobulin Source RGD Symbol Acc 2189
H03	SBR1225377	ENSRNOT00000065935.3	Hprt1	ENSRNOG0000048561	hypoxanthine phosphoribosyltransferase 1 Source RGD Symbol Acc 2826
H04	SBR1122313	ENSRNOT00000017468.2	Ldha	ENSRNOG0000013009	lactate dehydrogenase A Source RGD Symbol Acc 2996
H05	SBR1220572	ENSRNOT00000018820.5	Rplp1	ENSRNOG0000013874	ribosomal protein lateral stalk subunit P1 Source RGD Symbol Acc 621774
H06	SBR1218555	Sybr_RGDC	RGDC	Sybr_RGDC	Rat 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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