

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

## Mouse Angiogenesis

Cat. no. 249950 SBMM-024ZR

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](http://www.qiagen.com) for further details.

	1	2	3	4	5	6	7	8	9	10	11	12
A	Akt1	Ang	Angpt1	Angpt2	Anpep	Adgrb1	Ccl11	Ccl2	Cdh5	Col18a1	Col4a3	Csf3
B	Ccn2	Cxcl1	Cxcl2	Cxcl5	Edn1	EfnA1	Efnb2	Egf	Eng	Epos1	Ephb4	ErbB2
C	F2	F3	Fgf1	Fgf2	Fgf6	Fgfr3	Vegfd	Fit1	Fn1	Hgf	Hif1a	Ifng
D	Igf1	Il1b	Il6	Ilgav	Ilgb3	Jog1	Kdr	Cnmd	Lep	Mapk14	Mdk	Mmp14
E	Mmp19	Mmp2	Mmp9	Nos3	Nrp1	Nrp2	Pdgfa	Pecam1	Pgf	Plau	Plg	Plgs1
F	Plk2	S1pr1	Serpine1	Serpinf1	Smad5	Sphk1	Tbx1	Tek	Tgfa	Tgfb1	Tgfb2	Tgfb3
G	Tgfb1	Thbs1	Thbs2	Tie1	Timp1	Timp2	Tnf	Tnfsf12	Tymp	Vegfa	Vegfb	Vegfc
H	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	QIC	QIC	QIC	PPC	PPC	PPC

## Gene table: QuantiNova LNA PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	SBM1020452	ENSMUST00000144550.8	Akt1	ENSMUSG0000001729	thymoma viral proto-oncogene 1 Source MGI Symbol Acc MGI 87986
A02	SBM1031143	ENSMUST00000069011.8	Ang	ENSMUSG00000072115	angiogenin, ribonuclease, RNase A family, 5 Source MGI Symbol Acc MGI 88022
A03	SBM0848818	ENSMUST00000022921.6	Angpt1	ENSMUSG00000022309	angiopoietin 1 Source MGI Symbol Acc MGI 108448
A04	SBM0989251	ENSMUST000000170200.1	Angpt2	ENSMUSG00000031465	angiopoietin 2 Source MGI Symbol Acc MGI 1202890
A05	SBM0744926	ENSMUST00000049004.7	Anpep	ENSMUSG00000039062	alanyl (membrane) aminopeptidase Source MGI Symbol Acc MGI 5000466
A06	SBM1083363	ENSMUST000000185682.6	Adgrb1	ENSMUSG00000034730	adhesion G protein-coupled receptor B1 Source MGI Symbol Acc MGI 1933736
A07	SBM0757192	ENSMUST00000000342.2	Ccl11	ENSMUSG00000020676	chemokine (C-C motif) ligand 11 Source MGI Symbol Acc MGI 103576
A08	SBM0836747	ENSMUST00000000193.5	Ccl2	ENSMUSG00000035385	chemokine (C-C motif) ligand 2 Source MGI Symbol Acc MGI 98259
A09	SBM0916537	ENSMUST000000034339.9	Cdh5	ENSMUSG00000031871	cadherin 5 Source MGI Symbol Acc MGI 105057
A10	SBM0820945	ENSMUST000000156009.1	Col18a1	ENSMUSG0000001435	collagen, type XVIII, alpha 1 Source MGI Symbol Acc MGI 88451
A11	SBM1225392	ENSMUST000000152664.1	Col4a3	ENSMUSG00000079465	collagen, type IV, alpha 3 Source MGI Symbol Acc MGI 104688
A12	SBM0837472	ENSMUST000000038886.2	Csf3	ENSMUSG00000038067	colony stimulating factor 3 (granulocyte) Source MGI Symbol Acc MGI 1339751
B01	SBM0718058	ENSMUST000000176228.1	Ccn2	ENSMUSG00000019997	cellular communication network factor 1 Source MGI Symbol Acc MGI 95537
B02	SBM0998835	ENSMUST000000031327.8	Cxcl1	ENSMUSG00000029380	chemokine (C-X-C motif) ligand 1 Source MGI Symbol Acc MGI 108068
B03	SBM0694289	ENSMUST000000075433.7	Cxcl2	ENSMUSG00000058427	chemokine (C-X-C motif) ligand 2 Source MGI Symbol Acc MGI 1340094
B04	SBM0760625	ENSMUST000000202380.1	Cxcl5	ENSMUSG00000029371	chemokine (C-X-C motif) ligand 5 Source MGI Symbol Acc MGI 1096868
B05	SBM0992224	ENSMUST000000021796.8	Edn1	ENSMUSG00000021367	endothelin 1 Source MGI Symbol Acc MGI 95283
B06	SBM0921661	ENSMUST000000118587.7	Efna1	ENSMUSG00000027954	ephrin A1 Source MGI Symbol Acc MGI 103236
B07	SBM0938955	ENSMUST000000152698.1	Efnb2	ENSMUSG00000001300	ephrin B2 Source MGI Symbol Acc MGI 105097
B08	SBM1005237	ENSMUST000000197079.4	Egf	ENSMUSG00000028017	epidermal growth factor Source MGI Symbol Acc MGI 95290
B09	SBM0877670	ENSMUST000000156306.1	Eng	ENSMUSG00000026814	endoglin Source MGI Symbol Acc MGI 95392
B10	SBM0856458	ENSMUST000000024954.10	Epas1	ENSMUSG00000024140	endothelial PAS domain protein 1 Source MGI Symbol Acc MGI 109169
B11	SBM0843838	ENSMUST000000111055.8	Ephb4	ENSMUSG00000029710	Eph receptor B4 Source MGI Symbol Acc MGI 104757
B12	SBM0761323	ENSMUST000000136032.1	ErbB2	ENSMUSG00000062312	erb-b2 receptor tyrosine kinase 2 Source MGI Symbol Acc MGI 95410
C01	SBM0895867	ENSMUST000000028681.14	F2	ENSMUSG00000027249	coagulation factor II Source MGI Symbol Acc MGI 88380
C02	SBM0963811	ENSMUST000000029771.12	F3	ENSMUSG00000028128	coagulation factor III Source MGI Symbol Acc MGI 88381
C03	SBM1074617	ENSMUST000000235922.1	Fgf1	ENSMUSG00000036585	fibroblast growth factor 1 Source MGI Symbol Acc MGI 95515
C04	SBM0959713	ENSMUST000000138563.8	Fgf2	ENSMUSG00000037225	fibroblast growth factor 2 Source MGI Symbol Acc MGI 95516
C05	SBM1066026	ENSMUST000000000187.6	Fgf6	ENSMUSG00000000183	fibroblast growth factor 6 Source MGI Symbol Acc MGI 95520
C06	SBM0713841	ENSMUST000000169212.8	Fgfr3	ENSMUSG00000054252	fibroblast growth factor receptor 3 Source MGI Symbol Acc MGI 95524
C07	SBM0809039	ENSMUST000000124851.1	Vegfd	ENSMUSG00000031380	vascular endothelial growth factor D Source MGI Symbol Acc MGI 108037
C08	SBM0996637	ENSMUST000000110529.5	Ft1	ENSMUSG00000029648	FMS-like tyrosine kinase 1 Source MGI Symbol Acc MGI 95558
C09	SBM0934692	ENSMUST000000185408.6	Fn1	ENSMUSG00000026193	fibronectin 1 Source MGI Symbol Acc MGI 95566
C10	SBM0858725	ENSMUST000000200189.4	Hgf	ENSMUSG00000028864	hepatocyte growth factor Source MGI Symbol Acc MGI 96079
		ENSMUST000000		ENSMUSG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBM1003614	110464.7	Hif1a	000021109	hypoxia inducible factor 1, alpha subunit Source MGI Symbol Acc MGI 106918
C12	SBM0903694	ENSMUST00000 068592.4	lfng	ENSMUSG00 000055170	interferon gamma Source MGI Symbol Acc MGI 107656
D01	SBM1026650	ENSMUST00000 122386.7	lgf1	ENSMUSG00 000020053	insulin-like growth factor 1 Source MGI Symbol Acc MGI 96432
D02	SBM0738485	ENSMUST00000 028881.13	Il1b	ENSMUSG00 000027398	interleukin 1 beta Source MGI Symbol Acc MGI 96543
D03	SBM0742623	ENSMUST00000 026845.11	Il6	ENSMUSG00 000025746	interleukin 6 Source MGI Symbol Acc MGI 96559
D04	SBM0710817	ENSMUST00000 151463.1	Itgav	ENSMUSG00 000027087	integrin alpha V Source MGI Symbol Acc MGI 96608
D05	SBM0851696	ENSMUST00000 127140.2	Itgb3	ENSMUSG00 000020689	integrin beta 3 Source MGI Symbol Acc MGI 96612
D06	SBM0986327	ENSMUST00000 028735.7	Jag1	ENSMUSG00 000027276	jagged 1 Source MGI Symbol Acc MGI 1095416
D07	SBM0947462	ENSMUST00000 149573.1	Kdr	ENSMUSG00 000062960	kinase insert domain protein receptor Source MGI Symbol Acc MGI 96683
D08	SBM0774232	ENSMUST00000 167524.1	Cnmd	ENSMUSG00 000022025	chondromodulin Source MGI Symbol Acc MGI 1341171
D09	SBM0718370	ENSMUST00000 169505.1	Lep	ENSMUSG00 000059201	leptin Source MGI Symbol Acc MGI 104663
D10	SBM0683456	ENSMUST00000 114754.7	Mapk14	ENSMUSG00 000053436	mitogen-activated protein kinase 14 Source MGI Symbol Acc MGI 1346865
D11	SBM0843207	ENSMUST00000 028672.12	Mdk	ENSMUSG00 000027239	midkine Source MGI Symbol Acc MGI 96949
D12	SBM0735844	ENSMUST00000 197947.1	Mmp14	ENSMUSG00 000000957	matrix metalloproteinase 14 (membrane-inserted) Source MGI Symbol Acc MGI 101900
E01	SBM0873947	ENSMUST00000 219404.1	Mmp19	ENSMUSG00 000025355	matrix metalloproteinase 19 Source MGI Symbol Acc MGI 1927899
E02	SBM0690200	ENSMUST00000 034187.8	Mmp2	ENSMUSG00 000031740	matrix metalloproteinase 2 Source MGI Symbol Acc MGI 97009
E03	SBM1089430	ENSMUST00000 017881.2	Mmp9	ENSMUSG00 000017737	matrix metalloproteinase 9 Source MGI Symbol Acc MGI 97011
E04	SBM0681619	ENSMUST00000 030834.6	Nos3	ENSMUSG00 000028978	nitric oxide synthase 3, endothelial cell Source MGI Symbol Acc MGI 97362
E05	SBM0705168	ENSMUST00000 212746.1	Nrp1	ENSMUSG00 000025810	neuropilin 1 Source MGI Symbol Acc MGI 106206
E06	SBM0915998	ENSMUST00000 027112.12	Nrp2	ENSMUSG00 000025969	neuropilin 2 Source MGI Symbol Acc MGI 1100492
E07	SBM0932962	ENSMUST00000 124080.7	Pdgfra	ENSMUSG00 000025856	platelet derived growth factor, alpha Source MGI Symbol Acc MGI 97527
E08	SBM1044090	ENSMUST00000 068021.8	Pecam1	ENSMUSG00 000020717	platelet/endothelial cell adhesion molecule 1 Source MGI Symbol Acc MGI 97537
E09	SBM0900847	ENSMUST00000 220985.1	Pgf	ENSMUSG00 000004791	placental growth factor Source MGI Symbol Acc MGI 105095
E10	SBM0733272	ENSMUST00000 224141.1	Plau	ENSMUSG00 000021822	plasminogen activator, urokinase Source MGI Symbol Acc MGI 97611
E11	SBM0836626	ENSMUST00000 014578.6	Plg	ENSMUSG00 000059481	plasminogen Source MGI Symbol Acc MGI 97620
E12	SBM0775877	ENSMUST00000 149930.2	Ptgs1	ENSMUSG00 000047250	prostaglandin-endoperoxide synthase 1 Source MGI Symbol Acc MGI 97797
F01	SBM0988125	ENSMUST00000 227569.1	Plk2	ENSMUSG00 000022607	PTK2 protein tyrosine kinase 2 Source MGI Symbol Acc MGI 95481
F02	SBM0772480	ENSMUST00000 055676.3	S1pr1	ENSMUSG00 000045092	sphingosine-1-phosphate receptor 1 Source MGI Symbol Acc MGI 1096355
F03	SBM0809699	ENSMUST00000 041388.10	Serpine1	ENSMUSG00 000037411	serine (or cysteine) peptidase inhibitor, clade E, member 1 Source MGI Symbol Acc MGI 97608
F04	SBM0759610	ENSMUST00000 168902.7	Serpinf1	ENSMUSG00 000000753	serine (or cysteine) peptidase inhibitor, clade F, member 1 Source MGI Symbol Acc MGI 108080
F05	SBM0732806	ENSMUST00000 109876.7	Smad5	ENSMUSG00 000021540	SMAD family member 5 Source MGI Symbol Acc MGI 1328787
F06	SBM0831314	ENSMUST00000 063396.9	Sphk1	ENSMUSG00 000061878	sphingosine kinase 1 Source MGI Symbol Acc MGI 1316649
F07	SBM1052868	ENSMUST00000 009241.6	Tbx1	ENSMUSG00 000009097	T-box 1 Source MGI Symbol Acc MGI 98493
F08	SBM0875032	ENSMUST00000 131958.1	Tek	ENSMUSG00 000006386	TEK receptor tyrosine kinase Source MGI Symbol Acc MGI 98664
F09	SBM0940166	ENSMUST00000 192058.3	Tgfa	ENSMUSG00 000029999	transforming growth factor alpha Source MGI Symbol Acc MGI 98724
F10	SBM0850388	ENSMUST00000 002678.9	Tgfb1	ENSMUSG00 000002603	transforming growth factor, beta 1 Source MGI Symbol Acc MGI 98725

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBM0955433	ENSMUST00000194960.1	Tgfb2	ENSMUSG0000039239	transforming growth factor, beta 2 Source MGI Symbol Acc MGI 98726
F12	SBM1022458	ENSMUST0000003687.7	Tgfb3	ENSMUSG0000021253	transforming growth factor, beta 3 Source MGI Symbol Acc MGI 98727
G01	SBM0973351	ENSMUST0000044234.13	Tgfb1	ENSMUSG0000007613	transforming growth factor, beta receptor I Source MGI Symbol Acc MGI 98728
G02	SBM0895247	ENSMUST00000142588.1	Thbs1	ENSMUSG0000040152	thrombospondin 1 Source MGI Symbol Acc MGI 98737
G03	SBM0822435	ENSMUST00000170872.2	Thbs2	ENSMUSG0000023885	thrombospondin 2 Source MGI Symbol Acc MGI 98738
G04	SBM1028227	ENSMUST0000047421.5	Tie1	ENSMUSG0000033191	tyrosine kinase with immunoglobulin-like and EGF-like domains 1 Source MGI Symbol Acc MGI 99906
G05	SBM0839007	ENSMUST00000115342.9	Timp1	ENSMUSG0000001131	tissue inhibitor of metalloproteinase 1 Source MGI Symbol Acc MGI 98752
G06	SBM0732357	ENSMUST00000155707.2	Timp2	ENSMUSG0000017466	tissue inhibitor of metalloproteinase 2 Source MGI Symbol Acc MGI 98753
G07	SBM0788439	ENSMUST0000025263.14	Tnf	ENSMUSG0000024401	tumor necrosis factor Source MGI Symbol Acc MGI 104798
G08	SBM0826302	ENSMUST00000181810.7	Tnfsf12	ENSMUSG0000097328	tumor necrosis factor (ligand) superfamily, member 12 Source MGI Symbol Acc MGI 1196259
G09	SBM0980785	ENSMUST0000023285.4	Tymp	ENSMUSG0000022615	thymidine phosphorylase Source MGI Symbol Acc MGI 1920212
G10	SBM1079198	ENSMUST00000217017.1	Vegfa	ENSMUSG0000023951	vascular endothelial growth factor A Source MGI Symbol Acc MGI 103178
G11	SBM0920136	ENSMUST00000130048.7	Vegfb	ENSMUSG0000024962	vascular endothelial growth factor B Source MGI Symbol Acc MGI 106199
G12	SBM0863177	ENSMUST00000209703.1	Vegfc	ENSMUSG0000031520	vascular endothelial growth factor C Source MGI Symbol Acc MGI 109124
H01	SBM1220560	ENSMUST00000100497.10	Actb	ENSMUSG0000029580	actin, beta Source MGI Symbol Acc MGI 87904
H02	SBM0675336	ENSMUST00000102476.4	B2m	ENSMUSG0000060802	beta-2 microglobulin Source MGI Symbol Acc MGI 88127
H03	SBM1220562	ENSMUST00000117757.8	Gapdh	ENSMUSG0000057666	glyceraldehyde-3-phosphate dehydrogenase Source MGI Symbol Acc MGI 95640
H04	SBM1220563	ENSMUST0000026613.13	Gusb	ENSMUSG0000025534	glucuronidase, beta Source MGI Symbol Acc MGI 95872
H05	SBM1220564	ENSMUST00000166469.7	Hsp90ab1	ENSMUSG0000023944	heat shock protein 90 alpha (cytosolic), class B member 1 Source MGI Symbol Acc MGI 96247
H06	SBM1218554	Sybr_MGDC	MGDC	Sybr_MGDC	Mouse 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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