

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

## Mouse Drug Metabolism

Cat. no. 249950 SBMM-002ZR

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	Abcb1a	Abcb1b	Abcb4	Abcc1	Aoc1	Adh1	Adh4	Adh5	Ahr	Alad	Aldh1a1	Alox12
B	Alox15	Alox5	Apoe	Arnt	Asna1	Blvra	Blvrb	Ces1g	Ces2c	Chat1	Comt	Cyb5f3
C	Cyp11b2	Cyp17a1	Cyp19a1	Cyp1a1	Cyp1a2	Cyp27b1	Cyp2c29	Cyp2e1	Cyp3a11	Cyp3a44	Cyp4b1	Ephx1
D	Ephx2	Foah	Fbp1	Gad1	Gad2	Gckr	Ggt1	Gpi1	Gpx1	Gpx2	Gpx3	Gpx5
E	Gsr	Gsta1	Gsta3	Gsta4	Gstm1	Gstm2	Gstm3	Gstm4	Gstm5	Gstp1	Gsth1	Gstz1
F	Hk2	Hsd17b1	Hsd17b2	Hsd17b3	Lpo	Mgst1	Mgst2	Mgst3	Mpo	Mt2	Mt3	Mthfr
G	Nat1	Nat2	Nos3	Nqo1	Pkix	Pkm	Pon1	Pon2	Pon3	Snn	Srd5a1	Srd5a2
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	SBM1065613	ENSMUST00000126846.1	Abcb1a	ENSMUSG0000040584	ATP-binding cassette, sub-family B (MDR/TAP), member 1A Source MGI Symbol Acc MGI 97570
A02	SBM1012642	ENSMUST00000009058.9	Abcb1b	ENSMUSG0000028970	ATP-binding cassette, sub-family B (MDR/TAP), member 1B Source MGI Symbol Acc MGI 97568
A03	SBM0989061	ENSMUST00000197458.1	Abcb4	ENSMUSG0000042476	ATP-binding cassette, sub-family B (MDR/TAP), member 4 Source MGI Symbol Acc MGI 97569
A04	SBM0861683	ENSMUST00000147759.7	Abcc1	ENSMUSG0000023088	ATP-binding cassette, sub-family C (CFTR/MRP), member 1 Source MGI Symbol Acc MGI 102676
A05	SBM1011834	ENSMUST00000167529.2	Aoc1	ENSMUSG0000029811	amine oxidase, copper-containing 1 Source MGI Symbol Acc MGI 1923757
A06	SBM0686762	ENSMUST0000004232.9	Adh1	ENSMUSG0000074207	alcohol dehydrogenase 1 (class I) Source MGI Symbol Acc MGI 87921
A07	SBM1051665	ENSMUST00000161312.7	Adh4	ENSMUSG0000037797	alcohol dehydrogenase 4 (class II), pi polypeptide Source MGI Symbol Acc MGI 1349472
A08	SBM0683903	ENSMUST00000198126.1	Adh5	ENSMUSG0000028138	alcohol dehydrogenase 5 (class III), chi polypeptide Source MGI Symbol Acc MGI 87929
A09	SBM0733281	ENSMUST00000110811.2	Ahr	ENSMUSG0000019256	aryl-hydrocarbon receptor Source MGI Symbol Acc MGI 105043
A10	SBM0965189	ENSMUST00000030090.3	Alad	ENSMUSG0000028393	aminolevulinic acid, delta-, dehydratase Source MGI Symbol Acc MGI 96853
A11	SBM0801506	ENSMUST00000225337.2	Aldh1a1	ENSMUSG0000053279	aldehyde dehydrogenase family 1, subfamily A1 Source MGI Symbol Acc MGI 1353450
A12	SBM1027043	ENSMUST00000108574.2	Alox12	ENSMUSG0000000320	arachidonate 12-lipoxygenase Source MGI Symbol Acc MGI 87998
B01	SBM0748276	ENSMUST00000019068.6	Alox15	ENSMUSG0000018924	arachidonate 15-lipoxygenase Source MGI Symbol Acc MGI 87997
B02	SBM0830704	ENSMUST00000026795.12	Alox5	ENSMUSG0000025701	arachidonate 5-lipoxygenase Source MGI Symbol Acc MGI 87999
B03	SBM0912771	ENSMUST00000173739.7	ApoE	ENSMUSG0000002985	apolipoprotein E Source MGI Symbol Acc MGI 88057
B04	SBM0815999	ENSMUST00000140060.1	Arnt	ENSMUSG0000015522	aryl hydrocarbon receptor nuclear translocator Source MGI Symbol Acc MGI 88071
B05	SBM1027815	ENSMUST00000211702.1	Asna1	ENSMUSG0000052456	arsA arsenite transporter, ATP-binding, homolog 1 (bacterial) Source MGI Symbol Acc MGI 1928379
B06	SBM1005966	ENSMUST00000142861.1	Blvra	ENSMUSG0000001999	biliverdin reductase A Source MGI Symbol Acc MGI 88170
B07	SBM0839707	ENSMUST00000108358.7	Blvrb	ENSMUSG0000040466	biliverdin reductase B (flavin reductase (NADPH)) Source MGI Symbol Acc MGI 2385271
B08	SBM0810558	ENSMUST00000044602.7	Ces1g	ENSMUSG0000057074	carboxylesterase 1G Source MGI Symbol Acc MGI 88378
B09	SBM0959620	ENSMUST00000055052.5	Ces2c	ENSMUSG0000061825	carboxylesterase 2C Source MGI Symbol Acc MGI 2385905
B10	SBM1080164	ENSMUST00000065797.6	Chst1	ENSMUSG0000027221	carbohydrate sulfotransferase 1 Source MGI Symbol Acc MGI 1924219
B11	SBM0791437	ENSMUST00000000335.11	Comt	ENSMUSG0000000326	catechol-O-methyltransferase Source MGI Symbol Acc MGI 88470
B12	SBM0917439	ENSMUST00000162178.7	Cyb5r3	ENSMUSG0000018042	cytochrome b5 reductase 3 Source MGI Symbol Acc MGI 94893
C01	SBM0983746	ENSMUST00000167634.1	Cyp11b2	ENSMUSG0000022589	cytochrome P450, family 11, subfamily b, polypeptide 2 Source MGI Symbol Acc MGI 88584
C02	SBM0719547	ENSMUST00000236174.1	Cyp17a1	ENSMUSG0000003555	cytochrome P450, family 17, subfamily a, polypeptide 1 Source MGI Symbol Acc MGI 88586
C03	SBM0796819	ENSMUST00000034811.7	Cyp19a1	ENSMUSG0000032274	cytochrome P450, family 19, subfamily a, polypeptide 1 Source MGI Symbol Acc MGI 88587
C04	SBM0687229	ENSMUST00000216433.1	Cyp1a1	ENSMUSG0000032315	cytochrome P450, family 1, subfamily a, polypeptide 1 Source MGI Symbol Acc MGI 88588
C05	SBM0864852	ENSMUST00000034860.4	Cyp1a2	ENSMUSG0000032310	cytochrome P450, family 1, subfamily a, polypeptide 2 Source MGI Symbol Acc MGI 88589
C06	SBM0821726	ENSMUST00000172069.1	Cyp27b1	ENSMUSG0000006724	cytochrome P450, family 27, subfamily b, polypeptide 1 Source MGI Symbol Acc MGI 1098274
C07	SBM0759111	ENSMUST00000176624.7	Cyp2c29	ENSMUSG0000003053	cytochrome P450, family 2, subfamily c, polypeptide 29 Source MGI Symbol Acc MGI 103238
C08	SBM1037941	ENSMUST00000209253.1	Cyp2e1	ENSMUSG0000025479	cytochrome P450, family 2, subfamily e, polypeptide 1 Source MGI Symbol Acc MGI 88607
C09	SBM0724906	ENSMUST00000035918.7	Cyp3a11	ENSMUSG0000056035	cytochrome P450, family 3, subfamily a, polypeptide 11 Source MGI Symbol Acc MGI 88609
C10	SBM1080250	ENSMUST00000067479.5	Cyp3a44	ENSMUSG0000054417	cytochrome P450, family 3, subfamily a, polypeptide 44 Source MGI Symbol Acc MGI 2449818
		ENSMUST00000000000.0		ENSMUSG00000000000.0	cytochrome P450, family 4, subfamily b, polypeptide 1 Source MGI Symbol Acc

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBM0839189	143237.1	Cyp4b1	000028713	MGI 103225
C12	SBM0683548	ENSMUST00000154133.7	Ephx1	ENSMUSG0000038776	epoxide hydrolase 1, microsomal Source MGI Symbol Acc MGI 95405
D01	SBM1053432	ENSMUST00000225309.1	Ephx2	ENSMUSG00000022040	epoxide hydrolase 2, cytoplasmic Source MGI Symbol Acc MGI 99500
D02	SBM1047406	ENSMUST00000150614.1	Faah	ENSMUSG00000034171	fatty acid amide hydrolase Source MGI Symbol Acc MGI 109609
D03	SBM0968769	ENSMUST00000092888.10	Fbp1	ENSMUSG00000069805	fructose bisphosphatase 1 Source MGI Symbol Acc MGI 95492
D04	SBM0887552	ENSMUST00000094934.10	Gad1	ENSMUSG00000070880	glutamate decarboxylase 1 Source MGI Symbol Acc MGI 95632
D05	SBM0983792	ENSMUST00000156728.1	Gad2	ENSMUSG00000026787	glutamic acid decarboxylase 2 Source MGI Symbol Acc MGI 95634
D06	SBM0946513	ENSMUST00000202909.3	Gckr	ENSMUSG00000059434	glucokinase regulatory protein Source MGI Symbol Acc MGI 1096345
D07	SBM1021320	ENSMUST00000139459.7	Ggt1	ENSMUSG00000006345	gamma-glutamyltransferase 1 Source MGI Symbol Acc MGI 95706
D08	SBM1045586	ENSMUST00000038027.5	Gpi1	ENSMUSG00000036427	glucose phosphate isomerase 1 Source MGI Symbol Acc MGI 95797
D09	SBM0858533	ENSMUST00000082429.6	Gpx1	ENSMUSG00000063856	glutathione peroxidase 1 Source MGI Symbol Acc MGI 104887
D10	SBM0899268	ENSMUST00000082431.3	Gpx2	ENSMUSG00000042808	glutathione peroxidase 2 Source MGI Symbol Acc MGI 106609
D11	SBM0906281	ENSMUST00000149324.1	Gpx3	ENSMUSG00000018339	glutathione peroxidase 3 Source MGI Symbol Acc MGI 105102
D12	SBM0989192	ENSMUST00000110491.8	Gpx5	ENSMUSG00000004344	glutathione peroxidase 5 Source MGI Symbol Acc MGI 104886
E01	SBM0942303	ENSMUST00000033992.8	Gsr	ENSMUSG00000031584	glutathione reductase Source MGI Symbol Acc MGI 95804
E02	SBM0760940	ENSMUST00000098537.3	Gsta1	ENSMUSG00000074183	glutathione S-transferase, alpha 1 (Ya) Source MGI Symbol Acc MGI 1095417
E03	SBM0965916	ENSMUST00000027067.14	Gsta3	ENSMUSG00000025934	glutathione S-transferase, alpha 3 Source MGI Symbol Acc MGI 95856
E04	SBM0737924	ENSMUST00000034903.6	Gsta4	ENSMUSG00000032348	glutathione S-transferase, alpha 4 Source MGI Symbol Acc MGI 1309515
E05	SBM1066973	ENSMUST00000126593.2	Gstm1	ENSMUSG00000058135	glutathione S-transferase, mu 1 Source MGI Symbol Acc MGI 95860
E06	SBM0970167	ENSMUST00000012348.8	Gstm2	ENSMUSG00000040562	glutathione S-transferase, mu 2 Source MGI Symbol Acc MGI 95861
E07	SBM0812138	ENSMUST00000004136.9	Gstm3	ENSMUSG00000004038	glutathione S-transferase, mu 3 Source MGI Symbol Acc MGI 106026
E08	SBM0815421	ENSMUST00000106670.1	Gstm4	ENSMUSG00000027890	glutathione S-transferase, mu 4 Source MGI Symbol Acc MGI 95862
E09	SBM1042079	ENSMUST00000167387.7	Gstm5	ENSMUSG00000004032	glutathione S-transferase, mu 5 Source MGI Symbol Acc MGI 1309466
E10	SBM1021264	ENSMUST00000237239.1	Gstp1	ENSMUSG00000060803	glutathione S-transferase, pi 1 Source MGI Symbol Acc MGI 95865
E11	SBM0701691	ENSMUST00000139724.2	Gsth1	ENSMUSG00000001663	glutathione S-transferase, theta 1 Source MGI Symbol Acc MGI 107379
E12	SBM0788230	ENSMUST00000063117.9	Gstz1	ENSMUSG00000021033	glutathione transferase zeta 1 (maleylacetoacetate isomerase) Source MGI Symbol Acc MGI 1341859
F01	SBM1068583	ENSMUST00000000642.10	Hk2	ENSMUSG00000000628	hexokinase 2 Source MGI Symbol Acc MGI 1315197
F02	SBM0760736	ENSMUST00000019445.5	Hsd17b1	ENSMUSG0000019301	hydroxysteroid (17-beta) dehydrogenase 1 Source MGI Symbol Acc MGI 105077
F03	SBM0797562	ENSMUST00000034304.8	Hsd17b2	ENSMUSG00000031844	hydroxysteroid (17-beta) dehydrogenase 2 Source MGI Symbol Acc MGI 1096386
F04	SBM0787331	ENSMUST00000222810.1	Hsd17b3	ENSMUSG00000033122	hydroxysteroid (17-beta) dehydrogenase 3 Source MGI Symbol Acc MGI 107177
F05	SBM0751530	ENSMUST00000157004.1	Lpo	ENSMUSG0000009356	lactoperoxidase Source MGI Symbol Acc MGI 1923363
F06	SBM1051642	ENSMUST00000120302.7	Mgst1	ENSMUSG00000008540	microsomal glutathione S-transferase 1 Source MGI Symbol Acc MGI 1913850
F07	SBM0976305	ENSMUST00000161590.3	Mgst2	ENSMUSG00000074604	microsomal glutathione S-transferase 2 Source MGI Symbol Acc MGI 2448481
F08	SBM1020815	ENSMUST00000028005.2	Mgst3	ENSMUSG00000026688	microsomal glutathione S-transferase 3 Source MGI Symbol Acc MGI 1913697
F09	SBM1011865	ENSMUST00000107930.2	Mpo	ENSMUSG0000009350	myeloperoxidase Source MGI Symbol Acc MGI 97137
F10	SBM0896648	ENSMUST00000212806.1	Mt2	ENSMUSG00000031762	metallothionein 2 Source MGI Symbol Acc MGI 97172

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBM0931289	ENSMUST00000034211.9	Mt3	ENSMUSG00000031760	metallothionein 3 Source MGI Symbol Acc MGI 97173
F12	SBM0820259	ENSMUST00000097788.10	Mthfr	ENSMUSG00000029009	methylenetetrahydrofolate reductase Source MGI Symbol Acc MGI 106639
G01	SBM0891705	ENSMUST000000212171.1	Nat1	ENSMUSG00000025588	N-acetyl transferase 1 Source MGI Symbol Acc MGI 97279
G02	SBM0680837	ENSMUST00000093470.6	Nat2	ENSMUSG00000051147	N-acetyltransferase 2 (arylamine N-acetyltransferase) Source MGI Symbol Acc MGI 109201
G03	SBM0681619	ENSMUST00000030834.6	Nos3	ENSMUSG00000028978	nitric oxide synthase 3, endothelial cell Source MGI Symbol Acc MGI 97362
G04	SBM0878519	ENSMUST00000003947.8	Nqo1	ENSMUSG00000003849	NAD(P)H dehydrogenase, quinone 1 Source MGI Symbol Acc MGI 103187
G05	SBM0893001	ENSMUST000000127058.1	Pklr	ENSMUSG00000041237	pyruvate kinase liver and red blood cell Source MGI Symbol Acc MGI 97604
G06	SBM1088066	ENSMUST000000214571.1	Pkm	ENSMUSG00000032294	pyruvate kinase, muscle Source MGI Symbol Acc MGI 97591
G07	SBM0804103	ENSMUST000000176945.1	Pon1	ENSMUSG00000002588	paraoxonase 1 Source MGI Symbol Acc MGI 103295
G08	SBM0989508	ENSMUST000000135342.1	Pon2	ENSMUSG00000032667	paraoxonase 2 Source MGI Symbol Acc MGI 106687
G09	SBM1012826	ENSMUST000000156848.7	Pon3	ENSMUSG00000029759	paraoxonase 3 Source MGI Symbol Acc MGI 106686
G10	SBM0751652	ENSMUST000000228962.1	Snn	ENSMUSG00000037972	stannin Source MGI Symbol Acc MGI 1276549
G11	SBM0677862	ENSMUST000000059235.8	Srd5a1	ENSMUSG00000021594	steroid 5 alpha-reductase 1 Source MGI Symbol Acc MGI 98400
G12	SBM0821488	ENSMUST000000043458.8	Srd5a2	ENSMUSG00000038541	steroid 5 alpha-reductase 2 Source MGI Symbol Acc MGI 2150380
H01	SBM1220560	ENSMUST000000100497.10	Actb	ENSMUSG00000029580	actin, beta Source MGI Symbol Acc MGI 87904
H02	SBM0675336	ENSMUST000000102476.4	B2m	ENSMUSG00000060802	beta-2 microglobulin Source MGI Symbol Acc MGI 88127
H03	SBM1220562	ENSMUST000000117757.8	Gapdh	ENSMUSG00000057666	glyceraldehyde-3-phosphate dehydrogenase Source MGI Symbol Acc MGI 95640
H04	SBM1220563	ENSMUST000000026613.13	Gusb	ENSMUSG00000025534	glucuronidase, beta Source MGI Symbol Acc MGI 95872
H05	SBM1220564	ENSMUST000000166469.7	Hsp90ab1	ENSMUSG00000023944	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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