

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

## Mouse Drug Metabolism: Phase I Enzymes

Cat. no. 249950 SBMM-069ZR

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.

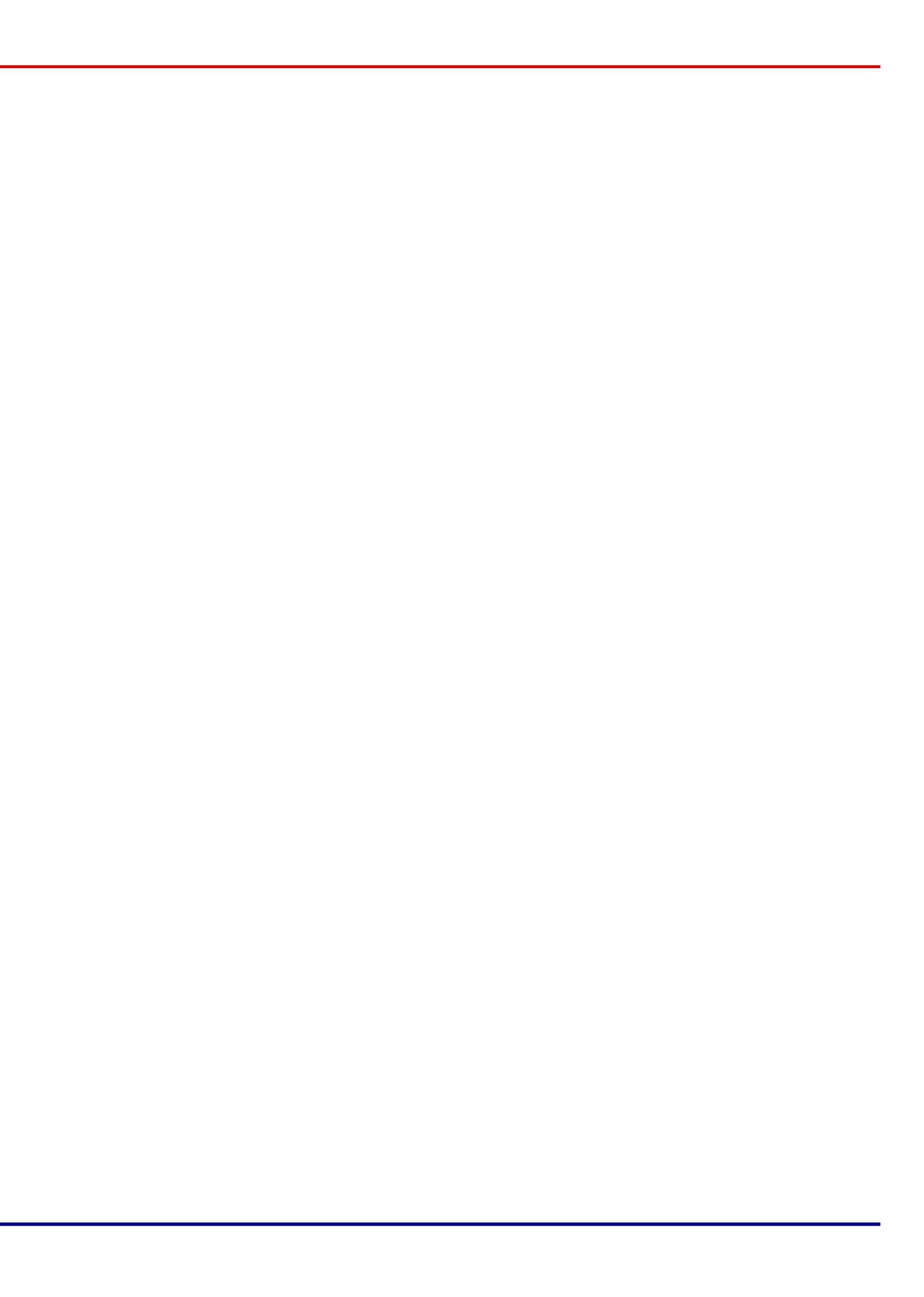
	1	2	3	4	5	6	7	8	9	10	11	12
A	A3galt2	A4galt	Aanat	Acs11	Acs13	Acs14	Acsm1	Acsm3	Agat	Alg5	As3mt	Baat
B	Kyat1	Ces1d	Ces1e	Ces1g	Ces2c	Ces5a	Chat7	Comt	Ddost	Eef1b2	Ephx1	Ephx2
C	Galnt1	Galnt3	Gamt	Gcnt1	Glyat	Gnmt	Gsta3	Gsta4	Gstk1	Gstm2	Gstm3	Gstm4
D	Gsim5	Gsto1	Gsto2	Gstp1	Gstt1	Gstt2	Has1	Hnmt	Inmt	Mgat1	Mgat1	Mgst2
E	Mgst3	Naa20	Nat1	Nat2	Nnmt	Nqo1	Nqo2	Pnmt	Pomgnt1	Ptges	Sat1	Sult1a1
F	Sult1b1	Sult1c1	Sult1c2	Sult1e1	Sult2b1	Sult4a1	Sult5a1	Sult6b1	Tpmt	Tst	Ugcg	Ugt1a1
G	Ugt1a2	Ugt1a6a	Ugt2a1	Ugt2a3	Ugt2b1	Ugt2b34	Ugt2b37	Ugt2b38	Ugt2b5	Ugt3a1	Ugt8a	Xdh
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	SBM0694775	ENSMUST00000106077.7	A3galt2	ENSMUSG0000028794	alpha 1,3-galactosyltransferase 2 (isoglobotriaosylceramide synthase) Source MGI Symbol Acc MGI 2685279
A02	SBM1030985	ENSMUST00000049530.13	A4galt	ENSMUSG0000047878	alpha 1,4-galactosyltransferase Source MGI Symbol Acc MGI 3512453
A03	SBM0826691	ENSMUST00000021160.9	Aanat	ENSMUSG0000020804	arylalkylamine N-acetyltransferase Source MGI Symbol Acc MGI 1328365
A04	SBM0793742	ENSMUST00000021164.1	Acs1	ENSMUSG0000018796	acyl-CoA synthetase long-chain family member 1 Source MGI Symbol Acc MGI 102797
A05	SBM0941480	ENSMUST000000142704.7	Acs13	ENSMUSG0000032883	acyl-CoA synthetase long-chain family member 3 Source MGI Symbol Acc MGI 1921455
A06	SBM0931597	ENSMUST000000033634.4	Acs14	ENSMUSG0000031278	acyl-CoA synthetase long-chain family member 4 Source MGI Symbol Acc MGI 1354713
A07	SBM1002037	ENSMUST000000047929.12	Acsm1	ENSMUSG0000033533	acyl-CoA synthetase medium-chain family member 1 Source MGI Symbol Acc MGI 2152200
A08	SBM0904518	ENSMUST000000149598.1	Acsm3	ENSMUSG0000030935	acyl-CoA synthetase medium-chain family member 3 Source MGI Symbol Acc MGI 99538
A09	SBM1045946	ENSMUST000000027491.6	Agxt	ENSMUSG0000026272	alanine-glyoxylate aminotransferase Source MGI Symbol Acc MGI 1329033
A10	SBM1075360	ENSMUST000000044567.3	Alg5	ENSMUSG0000036632	asparagine-linked glycosylation 5 (dolichyl-phosphate beta-glucosyltransferase) Source MGI Symbol Acc MGI 1913498
A11	SBM0695900	ENSMUST000000003655.8	As3mt	ENSMUSG0000003559	arsenic (+3 oxidation state) methyltransferase Source MGI Symbol Acc MGI 1929882
A12	SBM0795135	ENSMUST000000043056.8	Baat	ENSMUSG0000039653	bile acid-Coenzyme A amino acid N-acyltransferase Source MGI Symbol Acc MGI 106642
B01	SBM0714520	ENSMUST000000113661.9	Kyat1	ENSMUSG0000039648	kynurenine aminotransferase 1 Source MGI Symbol Acc MGI 1917516
B02	SBM0982287	ENSMUST000000148340.1	Ces1d	ENSMUSG0000056973	carboxylesterase 1D Source MGI Symbol Acc MGI 2148202
B03	SBM0836703	ENSMUST000000176282.1	Ces1e	ENSMUSG0000061959	carboxylesterase 1E Source MGI Symbol Acc MGI 95432
B04	SBM0810558	ENSMUST000000044602.7	Ces1g	ENSMUSG0000057074	carboxylesterase 1G Source MGI Symbol Acc MGI 88378
B05	SBM0959620	ENSMUST000000055052.5	Ces2c	ENSMUSG0000061825	carboxylesterase 2C Source MGI Symbol Acc MGI 2385905
B06	SBM1053542	ENSMUST000000212009.1	Ces5a	ENSMUSG0000058019	carboxylesterase 5A Source MGI Symbol Acc MGI 1915185
B07	SBM0878525	ENSMUST000000044138.7	Chst7	ENSMUSG0000037347	carbohydrate (N-acetylglucosamino) sulfotransferase 7 Source MGI Symbol Acc MGI 1891767
B08	SBM0791437	ENSMUST000000000335.11	Comt	ENSMUSG0000000326	catechol-O-methyltransferase Source MGI Symbol Acc MGI 88470
B09	SBM0941827	ENSMUST000000030538.4	Ddost	ENSMUSG0000028757	dolichyl-di-phosphooligosaccharide-protein glycotransferase Source MGI Symbol Acc MGI 1194508
B10	SBM0747330	ENSMUST000000142062.7	Eef1b2	ENSMUSG0000025967	eukaryotic translation elongation factor 1 beta 2 Source MGI Symbol Acc MGI 1929520
B11	SBM0683548	ENSMUST000000154133.7	Ephx1	ENSMUSG0000038776	epoxide hydrolase 1, microsomal Source MGI Symbol Acc MGI 95405
B12	SBM1053432	ENSMUST000000225309.1	Ephx2	ENSMUSG0000022040	epoxide hydrolase 2, cytoplasmic Source MGI Symbol Acc MGI 99500
C01	SBM0874934	ENSMUST000000178605.1	Galnt1	ENSMUSG0000000420	polypeptide N-acetylgalactosaminyltransferase 1 Source MGI Symbol Acc MGI 894693
C02	SBM0904601	ENSMUST000000153563.1	Galnt3	ENSMUSG0000026994	polypeptide N-acetylgalactosaminyltransferase 3 Source MGI Symbol Acc MGI 894695
C03	SBM0777625	ENSMUST000000148615.1	Gamt	ENSMUSG0000020150	guanidinoacetate methyltransferase Source MGI Symbol Acc MGI 1098221
C04	SBM0797874	ENSMUST000000169897.1	Gcnt1	ENSMUSG0000038843	glucosaminyl (N-acetyl) transferase 1, core 2 Source MGI Symbol Acc MGI 95676
C05	SBM0837891	ENSMUST000000123173.1	Glyat	ENSMUSG0000063683	glycine-N-acyltransferase Source MGI Symbol Acc MGI 2147502
C06	SBM1008057	ENSMUST000000233086.1	Gnmt	ENSMUSG0000002769	glycine N-methyltransferase Source MGI Symbol Acc MGI 1202304
C07	SBM0965916	ENSMUST000000027067.14	Gsta3	ENSMUSG0000025934	glutathione S-transferase, alpha 3 Source MGI Symbol Acc MGI 95856
C08	SBM0737924	ENSMUST000000034903.6	Gsta4	ENSMUSG0000032348	glutathione S-transferase, alpha 4 Source MGI Symbol Acc MGI 1309515
C09	SBM0975188	ENSMUST000000031897.7	Gstk1	ENSMUSG0000029864	glutathione S-transferase kappa 1 Source MGI Symbol Acc MGI 1923513
C10	SBM0970167	ENSMUST000000012348.8	Gstm2	ENSMUSG0000040562	glutathione S-transferase, mu 2 Source MGI Symbol Acc MGI 95861
		ENSMUST000000		ENSMUSG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBM0812138	004136.9	Gstm3	000004038	glutathione S-transferase, mu 3 Source MGI Symbol Acc MGI 106026
C12	SBM0815421	ENSMUST00000106670.1	Gstm4	ENSMUSG0000027890	glutathione S-transferase, mu 4 Source MGI Symbol Acc MGI 95862
D01	SBM1042079	ENSMUST00000167387.7	Gstm5	ENSMUSG0000004032	glutathione S-transferase, mu 5 Source MGI Symbol Acc MGI 1309466
D02	SBM0969929	ENSMUST00000236902.1	Gsto1	ENSMUSG0000025068	glutathione S-transferase omega 1 Source MGI Symbol Acc MGI 1342273
D03	SBM0698729	ENSMUST00000120645.7	Gsto2	ENSMUSG0000025069	glutathione S-transferase omega 2 Source MGI Symbol Acc MGI 1915464
D04	SBM1021264	ENSMUST00000237239.1	Gstp1	ENSMUSG0000060803	glutathione S-transferase, pi 1 Source MGI Symbol Acc MGI 95865
D05	SBM0701691	ENSMUST00000139724.2	Gsth1	ENSMUSG0000001663	glutathione S-transferase, theta 1 Source MGI Symbol Acc MGI 107379
D06	SBM0751299	ENSMUST00000219343.1	Gsth2	ENSMUSG0000033318	glutathione S-transferase, theta 2 Source MGI Symbol Acc MGI 106188
D07	SBM0720985	ENSMUST00000003762.7	Has1	ENSMUSG0000003665	hyaluronan synthase 1 Source MGI Symbol Acc MGI 106590
D08	SBM0687474	ENSMUST00000114497.1	Hnmt	ENSMUSG0000026986	histamine N-methyltransferase Source MGI Symbol Acc MGI 2153181
D09	SBM0858219	ENSMUST00000003569.5	Inmt	ENSMUSG0000003477	indolethylamine N-methyltransferase Source MGI Symbol Acc MGI 102963
D10	SBM0916109	ENSMUST00000167400.7	Mgat1	ENSMUSG0000020346	mannoside acetylglucosaminyltransferase 1 Source MGI Symbol Acc MGI 96973
D11	SBM1051642	ENSMUST00000120302.7	Mgst1	ENSMUSG0000008540	microsomal glutathione S-transferase 1 Source MGI Symbol Acc MGI 1913850
D12	SBM0976305	ENSMUST00000161590.3	Mgst2	ENSMUSG0000074604	microsomal glutathione S-transferase 2 Source MGI Symbol Acc MGI 2448481
E01	SBM1020815	ENSMUST00000028005.2	Mgst3	ENSMUSG0000026688	microsomal glutathione S-transferase 3 Source MGI Symbol Acc MGI 1913697
E02	SBM1008024	ENSMUST00000165635.1	Naa20	ENSMUSG0000002728	N(alpha)-acetyltransferase 20, NatB catalytic subunit Source MGI Symbol Acc MGI 1915127
E03	SBM0891705	ENSMUST00000212171.1	Nat1	ENSMUSG0000025588	N-acetyl transferase 1 Source MGI Symbol Acc MGI 97279
E04	SBM0680837	ENSMUST00000093470.6	Nat2	ENSMUSG0000051147	N-acetyltransferase 2 (arylamine N-acetyltransferase) Source MGI Symbol Acc MGI 109201
E05	SBM1010936	ENSMUST00000128076.1	Nnmt	ENSMUSG0000032271	nicotinamide N-methyltransferase Source MGI Symbol Acc MGI 1099443
E06	SBM0878519	ENSMUST00000003947.8	Nqo1	ENSMUSG0000003849	NAD(P)H dehydrogenase, quinone 1 Source MGI Symbol Acc MGI 103187
E07	SBM1090067	ENSMUST00000220844.1	Nqo2	ENSMUSG0000046949	N-ribosyldihyronicotinamide quinone reductase 2 Source MGI Symbol Acc MGI 104513
E08	SBM0791776	ENSMUST00000124527.1	Pnmt	ENSMUSG0000038216	phenylethanolamine-N-methyltransferase Source MGI Symbol Acc MGI 97724
E09	SBM1055228	ENSMUST00000136855.7	Pomgnt1	ENSMUSG0000028700	protein O-linked mannose beta 1,2-N-acetylglucosaminyltransferase Source MGI Symbol Acc MGI 1915523
E10	SBM0791278	ENSMUST00000056046.9	Ptges	ENSMUSG0000050737	prostaglandin E synthase Source MGI Symbol Acc MGI 1927593
E11	SBM0730543	ENSMUST00000134855.7	Sat1	ENSMUSG0000025283	spermidine/spermine N1-acetyl transferase 1 Source MGI Symbol Acc MGI 98233
E12	SBM1003246	ENSMUST00000155419.2	Sult1a1	ENSMUSG0000030711	sulfotransferase family 1A, phenol-preferring, member 1 Source MGI Symbol Acc MGI 102896
F01	SBM0987601	ENSMUST00000117455.7	Sult1b1	ENSMUSG0000029269	sulfotransferase family 1B, member 1 Source MGI Symbol Acc MGI 2136282
F02	SBM1087637	ENSMUST00000024738.7	Sult1c1	ENSMUSG0000023943	sulfotransferase family, cytosolic, 1C, member 1 Source MGI Symbol Acc MGI 102928
F03	SBM0937924	ENSMUST00000023886.6	Sult1c2	ENSMUSG0000023122	sulfotransferase family, cytosolic, 1C, member 2 Source MGI Symbol Acc MGI 1916333
F04	SBM0751380	ENSMUST00000031201.8	Sult1e1	ENSMUSG0000029272	sulfotransferase family 1E, member 1 Source MGI Symbol Acc MGI 98431
F05	SBM0842787	ENSMUST00000210147.1	Sult2b1	ENSMUSG0000003271	sulfotransferase family, cytosolic, 2B, member 1 Source MGI Symbol Acc MGI 1926342
F06	SBM0763366	ENSMUST00000229826.1	Sult4a1	ENSMUSG0000018865	sulfotransferase family 4A, member 1 Source MGI Symbol Acc MGI 1888971
F07	SBM0886253	ENSMUST00000122819.7	Sult5a1	ENSMUSG0000000739	sulfotransferase family 5A, member 1 Source MGI Symbol Acc MGI 1931463
F08	SBM0892700	ENSMUST00000169544.7	Sult6b1	ENSMUSG0000038045	sulfotransferase family, cytosolic, 6B, member 1 Source MGI Symbol Acc MGI 1920921
F09	SBM0853167	ENSMUST00000110118.7	Tpmt	ENSMUSG0000021376	thiopurine methyltransferase Source MGI Symbol Acc MGI 98812
F10	SBM1008421	ENSMUST00000058659.8	Tst	ENSMUSG0000044986	thiosulfate sulfurtransferase, mitochondrial Source MGI Symbol Acc MGI 98852

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBM0862352	ENSMUST00000133996.1	Ugcg	ENSMUSG0000028381	UDP-glucose ceramide glucosyltransferase Source MGI Symbol Acc MGI 1332243
F12	SBM0868036	ENSMUST00000073049.6	Ugt1a1	ENSMUSG0000089960	UDP glucuronosyltransferase 1 family, polypeptide A1 Source MGI Symbol Acc MGI 98898
G01	SBM0832860	ENSMUST00000049289.8	Ugt1a2	ENSMUSG0000090171	UDP glucuronosyltransferase 1 family, polypeptide A2 Source MGI Symbol Acc MGI 3576049
G02	SBM1066451	ENSMUST00000014263.5	Ugt1a6a	ENSMUSG0000054545	UDP glucuronosyltransferase 1 family, polypeptide A6A Source MGI Symbol Acc MGI 2137698
G03	SBM0894185	ENSMUST00000147854.5	Ugt2a1	ENSMUSG0000106677	UDP glucuronosyltransferase 2 family, polypeptide A1 Source MGI Symbol Acc MGI 2149905
G04	SBM0719156	ENSMUST00000031195.2	Ugt2a3	ENSMUSG0000035780	UDP glucuronosyltransferase 2 family, polypeptide A3 Source MGI Symbol Acc MGI 1919344
G05	SBM0988427	ENSMUST00000031183.2	Ugt2b1	ENSMUSG0000035836	UDP glucuronosyltransferase 2 family, polypeptide B1 Source MGI Symbol Acc MGI 1919023
G06	SBM1091735	ENSMUST00000113333.1	Ugt2b34	ENSMUSG0000029260	UDP glucuronosyltransferase 2 family, polypeptide B34 Source MGI Symbol Acc MGI 2140962
G07	SBM0932904	ENSMUST00000075858.3	Ugt2b37	ENSMUSG0000057425	UDP glucuronosyltransferase 2 family, polypeptide B37 Source MGI Symbol Acc MGI 2148239
G08	SBM0891842	ENSMUST00000072818.5	Ugt2b38	ENSMUSG0000061906	UDP glucuronosyltransferase 2 family, polypeptide B38 Source MGI Symbol Acc MGI 2140794
G09	SBM0746145	ENSMUST00000067790.6	Ugt2b5	ENSMUSG0000054630	UDP glucuronosyltransferase 2 family, polypeptide B5 Source MGI Symbol Acc MGI 98900
G10	SBM0910412	ENSMUST00000175695.8	Ugt3a1	ENSMUSG0000072664	UDP glycosyltransferases 3 family, polypeptide A1 Source MGI Symbol Acc MGI 2146055
G11	SBM0805794	ENSMUST00000198610.1	Ugt8a	ENSMUSG0000032854	UDP galactosyltransferase 8A Source MGI Symbol Acc MGI 109522
G12	SBM1090997	ENSMUST00000233621.1	Xdh	ENSMUSG0000024066	xanthine dehydrogenase Source MGI Symbol Acc MGI 98973
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	ENSMUST00000026613.13	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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