

Additional file 1

Table S1: Bayes Factors (BF) and single-SNP regression p values for all SNPs with a BF greater than 200 for direct and maternal calving difficulty and a BF greater than 40 for perinatal mortality

	SNP index	SNP name	Chr	Position	MAF	BF	P value
Direct Calving Difficulty							
Holstein-	4011	ARS-BFGL-NGS-109285	18	57589121	0.08	1684.26	8.95×10^{-10}
Friesian	525264	BovineHD1800016761	18	57548213	0.09	1523.56	8.95×10^{-10}
	741177	BovineHD4100008420	10	101721285	0.41	390.31	1.03×10^{-5}
	378664	BovineHD1200001026	12	3213665	0.25	253.84	3.37×10^{-4}
	168233	BovineHD0500000940	5	3768126	0.47	232.98	1.45×10^{-4}
	217768	BovineHD0600020010	6	72022013	0.38	223.73	9.91×10^{-8}
	168231	BovineHD0500000938	5	3764573	0.47	219.46	1.24×10^{-3}
Charolais	67815	BovineHD0200001668	2	5725051	0.13	3310.78	1.59×10^{-11}
	544037	BovineHD1900018321	19	63376818	0.47	1561.23	3.16×10^{-6}
	544036	BovineHD1900018320	19	63376120	0.47	907.81	3.16×10^{-6}
	533956	BovineHD1900007134	19	24561933	0.22	762.86	1.06×10^{-6}
	487931	BovineHD1600022505	16	77709903	0.39	709.33	1.38×10^{-5}
	761092	BTB-01124458	13	6683656	0.39	620.87	1.21×10^{-4}
	67816	BovineHD0200001669	2	5731378	0.13	383.88	1.46×10^{-11}
	398587	BovineHD1200024296	12	83902896	0.14	370.53	4.96×10^{-6}
	133777	BovineHD0300034147	3	117328152	0.39	295.66	5.01×10^{-4}
	253187	BovineHD0700024774	7	84451146	0.27	267.28	1.63×10^{-5}
	645696	BovineHD2600004234	26	16849292	0.36	234.46	1.69×10^{-6}
	631615	BovineHD2500001020	25	4516912	0.17	229.69	8.5×10^{-5}
	471782	BovineHD1600005037	16	18561778	0.37	213.47	5.57×10^{-5}
	645695	BovineHD2600004233	26	16848801	0.36	209.57	1.69×10^{-6}
Limousin	103101	BovineHD0300000138	3	657019	0.47	633.42	1.80×10^{-6}
Maternal calving difficulty							
Holstein-	544242	BovineHD1900018551	19	1942110	0.36	474.13	8.63×10^{-5}
Friesian	416314	BovineHD1300016191	13	56557875	0.14	220.36	4.18×10^{-11}
Charolais	126362	BovineHD0300026067	3	90597805	0.45	769.66	3.85×10^{-6}
	126363	BovineHD0300026068	3	90600368	0.47	700.57	4.85×10^{-6}
	126361	BovineHD0300026066	3	90596779	0.45	438.06	7.18×10^{-6}
	88704	BovineHD0200024474	2	85841490	0.27	306.54	9.47×10^{-7}
	88708	BovineHD0200024478	2	85872885	0.27	260.51	1.38×10^{-6}
	88688	BovineHD0200024458	2	85764305	0.27	241.09	9.47×10^{-7}
	252315	BovineHD0700023816	7	81801829	0.38	215.81	1.09×10^{-5}
	770652	Hapmap42056-BTA-108680	3	91136875	0.38	206.24	1.23×10^{-4}
Direct Perinatal Mortality							
Holstein-Friesian	644942	BovineHD2600003337	26	12797274	0.32	40.25	8.90×10^{-7}
Charolais	198553	BovineHD0500035019	5	119896486	0.36	52.13	2.83×10^{-6}
Limousin	750289	BovineHD4100018377	27	37032811	0.24	127.36	6.62×10^{-8}
	664893	BovineHD2700010585	27	37023628	0.23	92.22	1.33×10^{-7}
	664891	BovineHD2700010583	27	37021710	0.23	88.02	1.33×10^{-7}
	664898	BovineHD2700010590	27	37031485	0.23	87.06	1.33×10^{-7}
	664897	BovineHD2700010589	27	37030084	0.23	84.49	1.33×10^{-7}
	664890	BovineHD2700010582	27	37019464	0.23	78.42	1.33×10^{-6}
	664895	BovineHD2700010587	27	37027959	0.23	77.78	1.33×10^{-7}
	664894	BovineHD2700010586	27	37026496	0.24	75.56	1.33×10^{-7}

664899	BovineHD2700010591	27	37034231	0.23	72.55	1.33×10^{-7}
664885	BovineHD2700010577	27	37007637	0.24	69.40	7.69×10^{-8}
664888	BovineHD2700010580	27	37015031	0.24	67.05	7.69×10^{-8}

Table S2: Gene symbols cited within the manuscript and their corresponding gene name

Gene Symbol	Corresponding Name
ANKAR	Ankyrin and armadillo repeat containing
ASNSD1	Asparagine synthetase domain containing 1
C2H2orf88	Chromosome 2 open reading frame, human C2orf88
CEACAM18	Carcinoembryonic antigen-related cell adhesion molecule 18
CLOCK	Clock circadian regulator
CORIN	Corin, serine peptidase
CROT	Carnitine O-octanoyltransferase
CTU1	Cytosolic thiouridylase subunit 1
DCAF6	DDB1 and CUL4 associated factor 6
DENND6B	DENN/MADD domain containing 6B
ENSBTAG00000004082	Novel gene
ENSBTAG00000019276	Novel gene
HDAC10	Histone deacetylase 10
HGF	Hepatocyte growth factor (hepapoietin A; scatter factor)
HIBCH	3-hydroxyisobutyryl-CoA hydrolase
INPP1	Inositol polyphosphate-1-phosphatase
KIAA1324-like	KIAA1324-like ortholog
MAPK11	Mitogen-activated protein kinase 11
MAPK12	Mitogen-activated protein kinase 12
MFSD6	Major facilitator superfamily domain containing 6
MSTN	Myostatin
ORMDL1	ORMDL sphingolipid biosynthesis regulator 1
OSGEPL1	O-sialoglycoprotein endopeptidase-like 1, mRNA
PCLO	Piccolo presynaptic cytomatrix protein
PDYN	Prodynorphin
PLXNB2	Plexin B2
PMS1	PMS1 postmeiotic segregation increased 1
PPP6R2	Protein phosphatase 6, regulatory subunit 2
PRKCA	Protein kinase C, alpha
SEMA3D	Sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3D
SIGLEC12	Sialic acid binding Ig-like lectin 12
SIRPA	Signal-regulatory protein alpha
SLC20A1	Solute carrier family 20 (phosphate transporter), member 1
TMEM194B	Transmembrane protein 194B
UST	Uronyl-2-sulfotransferase
ZNF615	Zinc finger protein 615