

Supplementary table 1. Characteristics of studies selected of SNP

Study and year	Breed	party	Gene	PCR-RFLP/SSCP	SNP endonuclease	TDN	NDN
Alberto, 2009 [1]	YOR, LAN, DUR	2	<i>PRLR</i>	Yes	<i>Hpa II, Alu I</i>	1	No
An, 2017[2]	BER	NM	<i>IGFBP2, IGFBP3</i>	Yes	<i>Mbo II, BsaH I</i>	No	No
Balcells,2011 [3]	IBE × MEI	NM	<i>MUC4</i>	No	No	No	No
Balcells, 2011[4]	IBE × MEI, LAN, LW, PIE	NM	<i>ITIH SSC13</i>	Yes	<i>Exonuclease I</i>	No	No
Buske, 2005[5]	LW, LAN, LEI	more than 4	<i>BF</i>	Yes	<i>MAS</i>	No	No
Buske, 2006[6]	(LW × LAN) sows × LEI boars	NM	<i>ESR2, CYP21</i>	Yes	<i>Hsp92 II, Hae III, Pst I</i>	No	No
Chen, 2001[7]	YOR, LAN, ERH, XIAN	more than 1	<i>ESR, FSHβ</i>	Yes	<i>Pvu II</i>	4	4
Chen, 2004[8]	LAN, YOR, DUR.	more than 4	<i>LEPR</i>	Yes	<i>EcoR I</i>	No	No
Coster, 2012)[9]	LW	4	<i>DIO3</i>	No	No	No	No
Dall'Olio, 2010[10]	Italian LW	NM	<i>ESR2, AFP, BMPRI3, CLGN, CXCL10, GNRHR, MAN2B2, RNF4, pDAZL, RBP4</i>	No	No	No	No
Dan and Yonggang, 2020[11]	LW, LAN, SAB, TIB, MING, DIA, WUJ, BAO	more than 7	<i>KLK7</i>	Yes	<i>Alu I</i>	No	No
Depuydt, 1999[12]	NM	2	<i>ESR</i>	No	No	No	No
Ding, 2006[13]	ERH x DUR	NM	<i>PTGS2</i>	Yes	<i>Mse I</i>	No	No
Drogemuller, 2001[14]	German LAN, DUR, LW	10	<i>ESR, PRLR, RBP4</i>	Yes	<i>Pvu II, Alu I, Msp I</i>	No	No
Du, 2009[15]	DUR, ERH, DHB, LAN	NM	<i>ACVR1, ARHE, CED-6, CMYA3, COL4A4, DPP4, EPHA4, FLJ11457, GAD1, HAT1, HES6, HSPE1, KCNJ3, KLF7, NFE2L2, NR4A2, NRP2, ORC2L, SH3BP4, SP3, TRIP12</i>	Yes	<i>Cfr I, Xap I, BseM I, Eco105 I, Bsh1236 I, Tas I</i>	No	No
Du, 2022[16]	TIB, WUZ, BAMA, DUR, HAM, BER, PIE, LAN, YOR, BAME, JIN, RON, MEI,	1	<i>IDO2, OPN PRLR, CWH43, VMP1,</i>	No	No	1	No
Fang, 2014[17]	YOR, LAN, DUR, LANT, SES	6	<i>RFRP, β-actin</i>	Yes	NM	No	No

Feng, 2013[18]	LAN, LW, DUR	NM	<i>BMP-7</i>	Yes	<i>Ava I</i>	No	No
Fernández-Rodríguez, 2010 [19]	IBE MEI	NM	<i>SLC9A3R1, NOS2</i>	Yes	<i>MAS, GAS</i>	No	No
Franco, 2005[20]	LAN	NM	<i>PIT1, GH, GHRH</i>	Yes	<i>RsaI, Dde I, Alu I</i>	No	No
Gibson, 2002[21]	MEI, LW	2	<i>ESR</i>	Yes	<i>Pvu II</i>	No	No
Goliasova and Wolf, 2004[22]	Czech LW	1	<i>ESR</i>	Yes	<i>Pvu II</i>	1	No
Gonçalves, 2008[23]	Commercial sows	4	<i>ER, RBP4</i>	Yes	<i>Pvu II, Msp I</i>	2	No
He, 2017[24]	ERH	7	<i>UCHL1, RPS6KB1, CLTC</i>	No	No	No	No
He, 2021[25]	DUR sows	NM	<i>EXOC4</i>	Yes	<i>Hind III, Mlu I</i>	No	No
Horak, 2005[26]	Prestice Black-Pied sows	NM	<i>FUT1, ESR2</i>	Yes	<i>Pvu II</i>	1	No
Horogh, 2005[27]	Hungarian LW	more than 3	<i>ESR</i>	Yes	<i>Pvu II</i>	3	No
Houde, 2008[28]	LAN, DUR, YOR, MEI-LAN.	10	<i>ADIPOQ, ADIPOR1, DIPOR2</i>	Yes	<i>Superscript II</i>	No	No
Hunyadi-Bagi, 2016[29]	Hungarian LW, DUR, PIE	1	<i>BF, EGF, ESR, FSH B, H2AFZ, LEP, PRLP</i>	Yes	NM	No	No
Hwang, 2018[30]	BER	more than 1	<i>NAT9, MAP3K3</i>	Yes	<i>Alu I, Xcm I</i>	No	No
Jafarikia, 2015[31]	DUR, LAN, YOR	1-10	<i>ADIPOQ</i>	Yes	NM	No	No
Jiugang, 2012[32]	LW, LAN, SAB, TIB, MING, DIA, WUJ, BAO	more than 7	<i>NAT9, GAPDH</i>	Yes	<i>Alu I</i>	No	No
Kumchoo and Mekchay 2015[33]	LW, LAN	2	<i>NR4A1; GNB2L1;</i>	Yes	<i>Dde I, Taq I.</i>	No	No
Laliotis, 2017[34]	Greek black autochthonous pig	5	<i>BF, RBP4, ESR2</i>	Yes	<i>Msp I, Hsp92 II, Sma I</i>	2	2
Lan, 2012[35]	LW, LAN, SAB, TIB, MING, DIA, WUJ, BAO	more than 7	<i>ROPNI</i>	Yes	<i>Hae III</i>	No	No
Laplana, 2020[36]	LAN LW sows	more than 3	<i>SGK1, TAP1</i>	No	No	No	No
Lei and Yonggang 2012[37]	LW, LAN, SAB, TIB, MING, DIA, WUJ, BAO	more than 7	<i>OSAP</i>	Yes	<i>Xba I</i>	No	No
Li, 2002[38]	ERH, Lingao, MEI, DUR, LW, LAN, DW2 line, LWXM, TON, OIN, BAME	3	<i>FSHβ</i>	NM	NM	3	No

Lin, 2006[39]	PIE x HAM	NM	<i>β-actin (ACTB)</i>	No	No	No	No
Lin, 2009[40]	LW	8	<i>LIT</i>	No	No	No	No
Linville, 2001[41]	LAN, LW	NM	<i>ESR, EGF, RBP4, PTGS2, FSHβ, PRLR</i>	Yes	<i>Pvu II, Msp I, Mse I, ATaq I, Alu I</i>	No	No
Liu, 2018[42]	XIAN	NM	<i>PDIA4</i>	NM	NM	No	No
Liu, 2015[43]	LW, LAN, SAB, TIB, MING, DIA, WUJ, BAO	more than 7	<i>GADD45G</i>	Yes	<i>Rsa I</i>	No	No
Liu, 2016[44]	TON, MEI, LWi, LW II	more than 4	<i>ALAS1</i>	Yes	<i>Msp I</i>	No	No
Liu, 2011[45]	TON, MEI, LW, DIV	more than 4	<i>NR4A1</i>	Yes	<i>Dde I</i>	No	No
Liu, 2009[46]	LAN, TON, HUAI, MEI, LW	more than 4	<i>HSD17B1</i>	Yes	<i>Mva I, Nde I</i>	No	No
Liu, 2019[47]	YOR, Yimeng black pigs	more than 1	<i>NRDR</i>	No	No	No	No
Magotra 2015[48]	Niang Megha, Ghungroo pigs	NM	<i>FSH β</i>	Yes	SINE	2	No
Marantidis, 2016[49]	LW × LAN	3	<i>RBP4</i>	Yes	<i>Msp I</i>	3	No
Marantidis, 2013[50]	LW x LAN	more than 5	<i>BF</i>	Yes	<i>Sma I,</i>	No	No
Marek, 2001[51]	Polish LAN	1	<i>PRLR</i>	Yes	<i>Alu I</i>	1	No
Menčík, 2020[52]	LAN x LW	6	<i>RNF4</i>	Yes	<i>Sac II</i>	No	No
Menčík, 2019[53]	LAN × LW	1	<i>ESR1, RBP4</i>	Yes	<i>Pvu II., Msp I.</i>	6	6
Mihailov, 2014[54]	LW, LAN, LAN × YOR × DUR.	NM	<i>PRLR</i>	Yes	<i>Alu I</i>	2	No
Mucha, 2013[55]	Polish LW, LAN	8	<i>EGF, AREG, LIT</i>	Yes	<i>Sty I Dra III</i>	No	No
Muñoz, 2007) [56]	MEI, Jiaxing pig, LW, Spanish Wild boars	NM	<i>ESR1, ESR2</i>	Yes	<i>Ava I, Pvu II, Hsp92 II</i>	No	No
Muñoz, 2010[57]	Chinese-European porcine line	more than 6	<i>RBP4, ESR1, IGF2</i>	Yes	<i>Msp I, Pvu II</i>	No	No
Naha, 2020[58]	LAN, Indigenous pigs	NM	<i>ESR1, Prei3, FSHβ, OPN, CDK20</i>	Yes	NM	No	No
Niu, 2013[59]	LAN, LW, TON, MEI	4	<i>pMMP-9</i>	Yes	<i>Msp I, Sma I,</i>	No	No
Niu, 2008[60]	TIB	more than 8	<i>RBP4, OPN</i>	Yes	<i>Msp I</i>	2	No
Noguera, 2003[61]	LAN	more than 3	<i>ESR</i>	Yes	<i>Pvu II</i>	2	No

Norseeda, 2021[62]	LAN	1 至 8	<i>IL-4, IL-4R</i>	Yes	<i>BsuR I, PflF I, fl III, Mlu I, BsuR I, Alu I</i>	No	No
Omelka, 2008[63]	LW, White Meaty, LAN	1	<i>PRLR</i>	Yes	<i>Alu I</i>	3	No
Panasiewicz, 2017[64]	Hirschmann hybrid-line sows	8	<i>family pPAGs</i>	Yes	<i>Mnl I, Alu I, BstKT I</i>	No	No
Pang, 2019[65]	LW sows	more than 4	<i>FSHβ, ESR, CTNNAL1, miR-27a</i>	Yes	<i>Pvu II, Alu I, Hpa II</i>	2	2
Pradhan, 2018[66]	Ghoongroo sow	NM	<i>B</i>	NM	NM	No	No
PutnovÁ 2002[67]	LAN, LW	NM	<i>PRLR</i>	Yes	<i>Alu I</i>	6	No
Rahman, 2021 [68]	Doom Pigs	NM	<i>ESR</i>	Yes	<i>Alu I</i>	1	No
Rempel, 2010[69]	LAN-DUR-YOR.	NM	<i>PRLR, ESR</i>	No	No	No	No
Rothschild, 1996[70]	MEI, LW	more than 1	<i>ER</i>	Yes	<i>Pvu II</i>	No	No
Rothschild, 2000[71]	LW, LAN, DUR	NM	<i>RBP4</i>	Yes	<i>Msp I</i>	2	No
Santana, 2006[72]	LW, LAN, PIE	NM	<i>ESR</i>	Yes	<i>Pvu II</i>	No	No
Shife and Yonggang i, 2012[73]	LW, LAN, SAB, TIB, MING, DIA, WUJ, BAO	more than 7	<i>IBP4</i>	Yes	<i>Hha I</i>	No	No
Sironen, 2010[74]	Finnish YOR, LAN	1	<i>CPT1A, IGFBP1, IGFBP3, SLC22A5, COX2, IGFBP2, IGFBP5</i>	Yes	<i>BstN I, BtsC I, BsaH I, Hae III, BsrB I, Mbo II, Ava I</i>	No	No
Spötter, 2005[75]	synthetic German pig	10	<i>LIF</i>	Yes	<i>Dra III</i>	No	No
Spotter, 2009[76]	LW, German LAN	2-3	<i>LIF, RBP4</i>	Yes	<i>Dra III</i>	4	4
Sven2015[77]	NM	3	<i>PRLR</i>	Yes	<i>Msp I</i>	3	No
Tao, 2013[78]	Taihu pigs, TON, HEZ, HUAL, DIV, LW, LAN, DUR, PIE	more than 4	<i>TCF12, CTNNAL1, WNT10B</i>	Yes	<i>Alu I</i>	No	No
Tempfli, 2011[79]	Mangalica	NM	<i>PRLR</i>	Yes	<i>Mbi I, BsrG I, Alu I, Sac II</i>	1	No
Terman, 2005[80]	LW \times LAN	4	<i>PRLR, LEP</i>	Yes	<i>Alu I</i>	4	4
Terman, 2011[81]	LW \times LAN	1	<i>RBP4</i>	Yes	<i>Hinf I</i>	3	No
Terman and Kumalska, 2012[82]	Polish LW, LAN	more than 3	<i>ESR</i>	Yes	<i>Msp I</i>	6	No
Terman, 2016[83]	Polish swine	3	<i>PRLR</i>	Yes	<i>Ava I</i>	3	No
					<i>Alu I</i>		

Tomás, 2006) [84]	IBE × MEI	4	<i>PRLR</i>	NM	NM	No	No
Vallet, 2005 [85]	MEI, YOR, LAN, DUR	NM	<i>EPOR</i>	No	No	No	No
Vallet, 2005 [86]	MEI-LW	NM	<i>sFBP</i>	No	No	No	No
van Rens, 2003 [87]	LAN, MEI	NM	<i>PRLP</i>	Yes	<i>Alu I</i>	No	No
Vashi, 2021 [88]	NM	1	<i>ESR, EGF, FSHβ, PRLR, RBP4</i>	Yes	<i>Pvu II, Alu I, Msp I</i>	4	4
Vega, 2018 [89]	LW sows	NM	<i>LEP, ESR</i>	Yes	<i>Pvu II</i>	1	No
Wang, 2012 [90]	LW, LAN, Saba, Tibetan, MING, DIA, WUJ, BAO)	more than 7	<i>SPATA19</i>	Yes	<i>Alu I-</i>	No	No
Wang, 2008 [91]	BB	NM	<i>PRLR, BF</i>	Yes	<i>Alu I, Sma I</i>	2	2
Wu, 2019 [92]	Jiaxing Black sows	2	<i>GPR54</i>	No	No	No	No
Wu, 2010 [93]	LW sows	2	<i>TGF-β1</i>	No	No	No	No
Xiao, 2012 [94]	LW, LAN, DUR	9	<i>Muc1</i>	No	No	No	No
Xudong, 2017 [95]	LW, LAN, SAB, TIB, MING, DIA, WUJ, BAO	more than 7	<i>HTRA3</i>	Yes	<i>Hpa II</i>	No	No
Yin, 2019 [96]	LW	NM	<i>BMP7, BMP</i>	Yes	NM	No	No
Yong, 2012 [97]	LW, LAN, SAB, TIB, MING, DIA, WUJ, BAO	more than 7	<i>MYST2</i>	Yes	<i>Pst I</i>	No	No
Yonggang and Xueshan 2012 [98]	LW, LAN, SAB, TIB, MING, DIA, WUJ, BAO	more than 7	<i>LCK</i>	Yes	<i>Alu I-</i>	No	No
Yuan, 2007 [99]	MEI, OIN, JIN, DUR, LW, LAN	more than 2	<i>FSHR, ZP3</i>	No	No	No	No
Yuan, 2007 [100]	MEI, OIN, DUR, LAN, LW	more than 2	<i>ZP3</i>	Yes	<i>Rsa I, BstF5 I, Mse I, Taq I, Fnu4H I, Bcc I, Hinf I, HpyCH4 III</i>	No	No
Yurina, 2021 [101]	LW	NM	<i>ESR PRLR, FSHβ</i>	Yes	<i>Pvu II Alu I BsuR I Pvu II</i>	3	No
Žáková and Wolf, 2004 [102]	Czech LW sows	more than 2	<i>ESR</i>	Yes	<i>Pvu II</i>	2	No
Zhang, 2011 [103]	BB	more than 1	<i>EPOR</i>	No	No	No	No
Zhang, 2019 [104]	NM	more than 1	<i>AHR</i>	No	No	No	No

Zhang, 2012[105]	XIAN, LANT, SES, Zang pig, WUJ, Gaoligongshan pig, BAO, Sakan pig, LAN, YOR, DUR	6	<i>TDRP1, β-actin</i>	Yes	<i>Ssp I</i>	No	No
Zhang, 2015[106]	Wannan Black pigs, BW, BER	2	<i>FSHR</i>	Yes	No	No	No
Zhang, 2008[107]	DUR, ERH, DHB, LAN	NM	<i>GDF9</i>	Yes	<i>Mse I, Dde I, Hinf I</i>	No	No
Zhang, 2009[108]	LW, LAN, MEI, BAME, HUAI, TON, HEZ, DIV	more than 4	<i>pDAZL</i>	Yes	<i>Msp I, Taq I</i>	No	No
Zhang, 2009[109]	MEI, HEZ, TON, HUAI, BAME, LW, DIV, LAN, LW	more than 4	<i>H2AFZ</i>	Yes	<i>Bsu15 I</i>	No	No
Zhao, 1998[110]	ERH, Minipig, LAN, YOR	4	<i>FSHβ</i>	Yes	NM	No	No
Zhao and Liu, 2017[111]	LW, LAN, Saba, TIB, MING, DIA, WUJ, BAO	more than 7	<i>SUN5</i>	Yes	<i>Taq I</i>	No	No
Zhu, 2017[112]	Hebao, DUR, LAN, LW	NM	<i>ESR, FSHβ, MC4R, A-FABP</i>	Yes	<i>Pvu II, Taq I, Bsm I, Hinf I, Hae III</i>	8	8
Zhu, 2004[113]	TON	1	<i>ESR</i>	Yes		No	No
Ziólkowska, 2010[114]	Polish LW, LAN	NM	<i>PRLR</i>	Yes	<i>Alu I, Msp I</i>	No	No

Abbreviations: Not mentioned (NM). Traditional meta-analysis dataset number (TDN). Network meta-analysis dataset number (NDN). Bama pig (BAMA). Bamei pig (BAME). Baoshan pig (BAO). Beijing Black pig (BB). Berkshire (BER). Dahuaibai pig (DHB). Diannan small-ear pig (DIA). Duroc (DUR). Erhualian (ERH). Hampshire (HAM). Hezuo pig (HEZ). Huainan pig (HUAI). Iberian (IBE). Landrace (LAN). Lantang (LANT). and Leicoma (LEI). Large White (LW). Jinhua pig (JIN). Meishan pig (MEI). Mingguang small-ear pig (MING). Pietrain (PIE). Qingping pig (QIN). Rongchang (RON). Saba pig (SAB). Small-ear spotted pig (SES). Tibetan pig (TIB). Tongcheng (TON). Wujin pig (WUJ). Wuzhishan pig (WUZ). Xiang pig (XIAN). Yorkshire (YOR).

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