

Supplementary Table 1

Summary of the 31 variants initially genotyped in Pima Indians to evaluate the *ASK1* LD structure

Variant	Allele (minor/major)	mAF	Gene Location	Chr. Position
rs4351280	G/A	0.17	3' flanking	136919739
rs9402824	A/C	0.16	Intron 25	136932511
rs760863	G/A	0.17	Intron 23	136951409
rs2237264	A/G	0.03	Intron 21	136961671
rs3765258*	G/A	0.16	Exon 15	136985756
rs7747787	T/C	0.14	Intron 14	136986535
rs7775356	T/A	0.45	Intron 14	136998333
rs2237269	C/G	0.17	Intron 11	137008312
rs2076260*	C/T	0.22	Exon 10	137019261
rs3765259	T/C	0.27	Intron 8	137031976
rs1009709	T/C	0.28	Intron 5	137059442
rs9321567*	T/G	0.27	Exon 3	137067959
rs10484491 [†]	A/G	0.29	Intron 2	137069560
rs6928243	C/T	0.28	Intron 2	137074186
rs911185	C/T	0.29	Intron 2	137075399
rs1321477	T/C	0.27	Intron 1	137083526
rs1581713	C/T	0.27	Intron 1	137088173
rs9285484	G/A	0.28	Intron 1	137092247
rs12173676	A/T	0.27	Intron 1	137098194
rs1570056	C/T	0.29	Intron 1	137101620
rs911179	A/G	0.29	Intron 1	137103776
rs6570098	A/G	0.28	Intron 1	137113348
rs932589	T/C	0.27	Intron 1	137124831
rs9402845	A/G	0.27	Intron 1	137131215
rs9321570	G/C	0.29	Intron 1	137137372
rs1570054	T/C	0.27	Intron 1	137143419
rs9494569	C/G	0.28	Intron 1	137146486
rs3734552	A/G	0.26	Intron 1	137154326
rs5880308*	(CGCCG) _{4/5}	0.28	Promoter	137155377
rs1474988*	G/A	0.28	Promoter	137155946
rs35898099*	A/G	0.19	Promoter	137156451

Chr., chromosome, mAF, minor allele frequency. *SNPs identified by sequencing. [†]GWA SNP associated with insulin resistance. Other SNPs were directly selected from NCBI dbSNP (Build 36) which have been validated and have average heterozygosity >10%, to provide a denser coverage of the unsequenced intronic regions. For each SNP, the chromosome position was given according to dbSNP Build 36 and the alleles were named based on the positive strand.

Supplementary Table 2

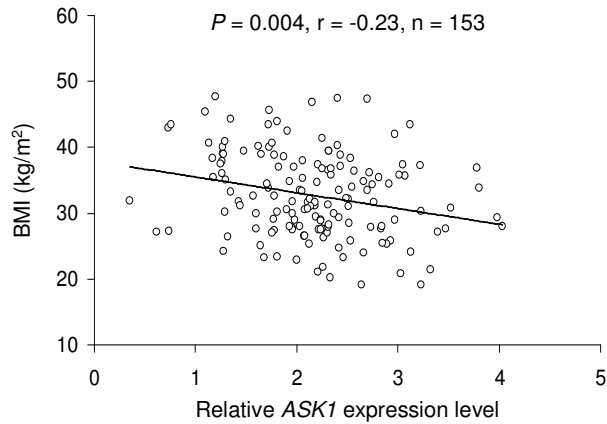
Quality control information for *ASK1* tag SNPs genotyped in the population-based samples of full-heritage Pima Indians and Native Americans

Tag SNP	Full-heritage Pima Indians (n = 3,501)			Native Americans (n = 3,723)		
	Call rate (%)	Duplicate discrepancy (%)	HWE- <i>P</i> value	Call rate (%)	Duplicate discrepancy (%)	HWE- <i>P</i> value
rs4351280	95	0.6	0.87			
rs3765258	92	0.0	0.94			
rs7775356	94	1.7	0.09	94	0.0	0.90
rs2237269	96	0.0	0.59			
rs2076260	90	1.3	0.34			
rs3765259	94	1.6	0.12			
rs1570056	97	0.0	0.93	95	0.0	0.61
rs35898099	91	1.2	0.13	96	0.0	0.53

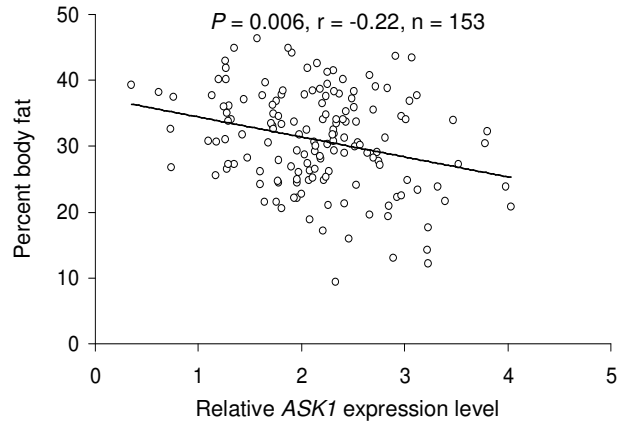
HWE, Hardy-Weinberg equilibrium. The discrepancy rates were determined by a blind duplicate genotyping of 220 full-heritage Pima Indians or 100 Native Americans.

Supplementary Figure 1

A

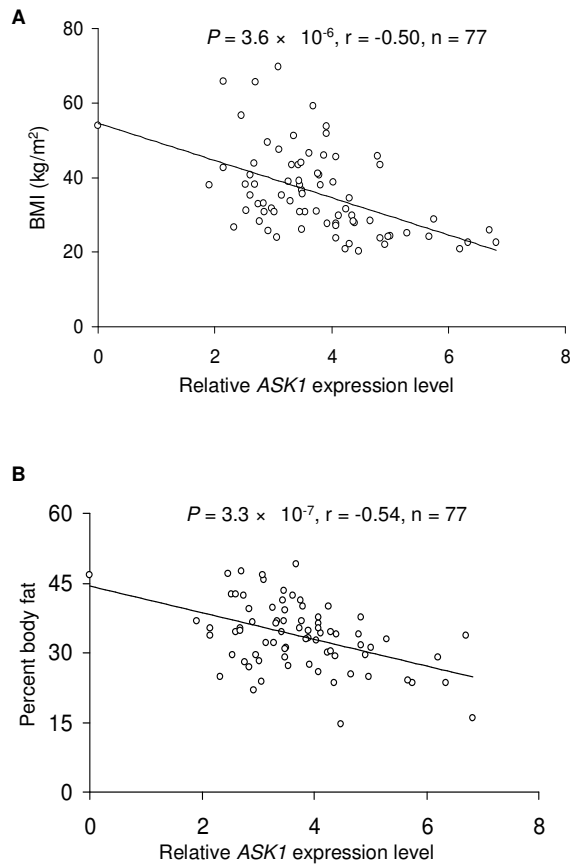


B



Correlations between ASK1 expression and (A) BMI and (B) percent body fat in the skeletal muscle of 153 non-diabetic Native Americans. Before the analysis, the relative ASK1 expression levels were logarithmically transformed to approximate the normal distribution. P values were adjusted for age, gender, and Pima heritage.

Supplementary Figure 2



Correlations between ASK1 expression and (A) BMI and (B) percent body fat in adipocytes isolated from 77 non-diabetic full-heritage Pima Indians. Before the analysis, the relative ASK1 expression levels were logarithmically transformed to approximate the normal distribution. P values were adjusted for age and gender.