Additional file 1

Table S1: GWAS database of *USP34*

SNP	Allele	F_A	F_U	CHISQ	P
rs777587	G/A	0.3014	0.2732	3.086	0.07898
rs4671398	A/G	0.2545	0.2392	0.9981	0.3178
rs11889205	A/G	0.01448	0.01134	0.625	0.4292
rs2290324	C/A	0.3971	0.3719	2.139	0.1436
rs13388389	C/A	0.01379	0.01134	0.3903	0.5321
rs7591772	G/C	0.3029	0.2716	3.742	0.05308
rs17007356	A/C	0.3012	0.3611	12.79	**3.49E-04**
rs2167565	C/T	0.2462	0.2333	0.7331	0.3919
rs10496091	T/C	0.01655	0.0119	1.245	0.2645
rs2167566	G/T	0.3953	0.3688	2.367	0.1239
rs17008097	G/C	0.2983	0.3576	12.47	**4.14E-04**
rs12622458	C/A	0.399	0.3697	2.881	0.08962
rs2600672	A/G	0.3946	0.3622	3.541	0.05989
rs2694619	C/T	0.2993	0.2775	1.836	0.1755
rs2694618	G/A	0.3022	0.2766	2.533	0.1115
rs17482440	C/T	0.3024	0.2768	2.521	0.1123
rs778157	C/G	0.3968	0.3683	2.73	0.09851
rs778160	G/A	0.2764	0.2517	2.458	0.117
rs778143	A/C	0.3947	0.3608	3.894	0.04845
rs1584301	C/T	0.3057	0.373	16	**6.34E-05**
rs2694643	A/G	0.3942	0.3617	3.579	0.05852
rs17008755	C/T	0.2967	0.3652	16.68	**4.43E-05**
rs10208769	A/T	0.3022	0.2713	3.727	0.05354
rs17008940	T/C	0.2766	0.343	16.33	**5.33E-05**
rs10496093	T/C	0.281	0.3465	15.52	**8.15E-05**
rs812925	C/G	0.203	0.186	1.475	0.2246
rs778139	A/G	0.2167	0.197	1.863	0.1723

P: p value

Table S2: Probes and primers of the three SNPs

SNPs	Probes	Primers
rs17008097	FAM-TAAGTAGTTTATTTCAGGACATC-MGB	F-GCTCCTGGCTTAAAGATTGTTTTT
	VIC-TAAGTAGTTTATTTGAGGACATC-MGB	R-TTCATTCATCCTGTAGAGTTCTTTCG
rs17008940	FAM-ACGGACTAACGTTACTGA-MGB	F-AGGGCAGCCGTTTGTAAAGA
	VIC-ACGGACTAACATTACTGAA-MGB	R-CCCAGGAAATGCTATAAACATGTTC

F: forward; R: reverse

Table S3 Allele frequencies comparison of *USP34* in four subgroups of PCOS and controls.

		Control	HA+OA+PCO (n=233)	HA+OA (n=90)	HA+ PCO (n=10)	OA+PCO (n=620)
rs17008097	MAF	0.331	0.325	0.382	0.35	0.328
	OR	-	1.03	0.80	0.92	1.01
	(95%CI)		(0.83-1.27)	(0.58-1.10)	(0.36-2.31)	(0.87-1.17)
rs17008940	MAF	0.315	0.306	0.365	0.35	0.339
	OR	-	1.05	0.80	0.85	0.90
	(95%CI)		(0.84-1.30)	(0.58-1.10)	(0.34-2.15)	(0.78-1.04)

HA: hyperandrogenism; OA: oligo-anovulation; PCO: polycystic ovaries; OR: Odd Ratio; CI: Confidence Interval.

Table S4: Genotype frequencies comparison in PCOS and controls using different genetic models

SNP	Genotype	PCOS	Control	P_{add}	P_{dom}	P_{rec}
rs17008097	CC/GC/GG	548/531/139	484/447/126	0.807	0.706	0.703
rs17008940	CC/TC/TT	575/513/130	505/438/114	0.948	0.931	0.787

P_{add}: statistic difference of additive model (the three genotypes, +/+ vs. +/- vs. -/-); P_{dom}: dominant model (homozygote of major allele frequency + heterozygote compared with homozygote of minor allele frequency, +/+ plus +/- vs. -/-) of genotype; P_{rec}: recessive model (homozygote of minor allele frequency compared with heterozygote+ homozygote of minor allele frequency, +/+ vs. +/- plus -/-) of genotype