

Supplementary Table 1. Hardy-Weinberg Equilibrium (HWE) for genotypes frequencies in SLE patients and in HCs

Genes	SNPs	Allele	SLE(N=567)			<i>p</i>	HCs(N=345)			<i>p</i>
			Q _i	E _i	χ		Q _i	E _i	χ	
IKBKE	rs15672	G/A	270	273.02	0.069	0.793	151	157.42	0.574	0.449
		G/G	203	201.49			148	144.79		
		A/A	94	92.49			46	42.79		
NFKBIA	rs1957106	G/A	194	198.21	0.255	0.614	128	126.06	0.082	0.775
		G/G	342	339.90			198	198.97		
		A/A	31	28.90			19	19.97		
BANK1	rs12640056	C/T	218	233.13	2.386	0.122	155	155.60	0.005	0.944
		C/C	294	286.44			149	148.70		
		T/T	55	47.44			41	40.70		
BANK1	rs6842661	G/A	218	233.13	2.386	0.122	155	155.60	0.005	0.944
		G/G	294	286.44			149	148.70		
		A/A	55	47.44			41	40.70		

Note: Q_i, Observation; E_i, Expectation

Supplementary Table 2. Genotype and allele frequencies of SNPs in SLE and HCs.

SNPs	Model	Genotype	SLE, n (%)	HCs, n (%)	OR (95% CI)	P
rs1957106	Dominant	AA+GA	225(39.68)	147(42.60)	0.89(0.68-1.1663)	0.383
		GG	342(60.32)	198(57.39)	1.00	
	Recessive	AA	31(5.47)	19(5.51)	0.99(0.55-1.79)	0.980
		GA+GG	536(94.53)	326(94.49)	1.00	
	Co-dominant	AA	31(5.47)	19(5.51)	0.95(0.52-1.72)	0.852
		GA	194(34.2249)	128(37.10)	0.88(0.66-1.1767)	0.366
		GG	342(60.32)	198(57.39)	1.00	
	Allele	A	256(22.57)	166(24.06)878(77.43)	0.92(0.74-1.1551)	0.466
		G	878(77.43)66(24.06)	524(75.94)	1.00	

Note: SNPs, single nucleotide polymorphisms; SLE, systemic lupus erythematosus; HCs, healthy controls.

Supplementary Table 3. Correlation between genetic polymorphism and autoantibodies (N,%)

rs12640056	N	TT+CT	N	CC	OR (95% CI)	P
Anti-dsDNA	254	134(52.76)	283	132 (46.64)	1.28(0.91-1.79)	0.157
Anti-RNP	237	119 (50.21)	255	129 (50.59)	0.99(0.69-1.40)	0.933
Anti-SM	237	59 (24.89)	255	72 (28.24)	0.84(0.56-1.26)	0.402
Anti-SSA	237	134 (56.54)	255	156 (61.18)	0.83(0.58-1.18)	0.296
Anti-SSB	237	25 (10.55)	255	35 (13.73)	0.74(0.43-1.28)	0.282
Anti-RIB	237	62 (26.16)	255	82 (32.16)	0.75(0.51-1.11)	0.144

Note: Anti-dsDNA, anti-double-stranded DNA antibodies; Anti-RNP, anti-ribonucleoprotein antibodies; Anti-SM, anti-Smith antibodies; Anti-SSA, anti-Sjögren's-syndrome related antigen A antibodies; Anti-SSB, anti-Sjögren's-syndrome related antigen B antibodies; Anti-RIB, anti-ribosome antibodies.

Supplementary Table 4. Correlation between genetic polymorphism and cytokines

Cytokines (pg/mL)	rs15672 AA+GA		rs15672 GG		<i>P</i>
	N	Median (IQR)	N	Median (IQR)	
IL-1 β	83	3.15 (1.87-6.83)	44	3.15 (3.15-6.07)	0.531
IL-6	84	4.57 (2.30-8.82)	45	3.51 (2.00-7.61)	0.328
IL-10	37	11.24 (3.23-24.52)	21	7.42 (5.30-12.35)	0.395
IL-17	75	2.18 (2.18-3.96)	39	3.07 (2.18-3.96)	0.551
IFN- γ	80	5.16 (5.16-11.99)	42	5.16 (3.03-10.71)	0.467
IP-10	84	79.60 (50.74-232.58)	45	86.20 (41.75-223.05)	0.700
Granzyme B	84	8.49 (4.57-15.64)	45	6.85 (3.53-15.84)	0.643
IL-21	84	4.98 (4.29-6.82)	45	4.98 (3.61-7.75)	0.477
IL-4	20	13.46 (13.46-24.65)	8	31.34 (13.46-49.08)	0.143
TNF- α	80	4.63 (2.55-10.47)	44	5.84 (2.66-11.25)	0.775
IL-18	84	236.67 (161.39-349.71)	45	250.61 (173.39-328.08)	0.904
IL-33	23	1.80 (0.44-4.30)	11	1.80 (0.44-6.68)	0.760

Note: IQR, interquartile Range; IL, interleukin; IFN- γ , interferon-gamma; IP-10, interferon-gamma-induced protein 10; TNF- α , tumour necrosis factor alpha.

Supplementary Table 5. Correlation between genetic polymorphism and organ involvement

Organ involvement	rs12640056 (N, %)		OR (95% CI)	<i>P</i>
	TT+CT(n=273)	CC(n=294)		
Lupus nephritis	160 (58.61)	177 (60.20)	0.94(0.67-1.31)	0.699
Neuropathy	22 (8.06)	25 (8.50)	0.94(0.52-1.72)	0.848
Arthritis	78(28.57)	85 (28.91)	0.98(0.68-1.42)	0.929
Skin lesions	95(34.80)	90(30.61)	1.21(0.85-1.72)	0.288
Serositis	59(21.61)	58(19.73)	1.12(0.75-1.69)	0.580
Pericarditis	59(21.61)	57(19.39)	1.15(0.76-1.72)	0.512