

Supplemental Material, Table S1

Supplemental Material, Table S1. Stratum-specific estimates (OR, 95% CI) and relative excess risk due to interaction (RERI, 95% CI) for each SNP-lead association using single-referent coding, adjusting for education and ancestry

Chr.	Gene*	rs number	Lead Exposure	SNP	OR (95% CI)	PD	RERI (95% CI)
5	<i>IL7R</i>	rs6897932	No	No	1.00		
			Yes	No	1.12 (0.73, 1.72)	0.12	
			Yes	Yes	2.19 (1.00, 4.82)		
6	<i>TNFα</i>	rs1799964	No	No	1.00		
			Yes	No	2.06 (0.78, 5.48)	-0.13	-0.25 (-2.68, 2.18)
			Yes	Yes	2.56 (1.17, 5.58)		
		rs1800629	No	No	1.00		
			Yes	No	1.69 (0.62, 4.58)	-0.87	-1.10 (-3.54, 1.35)
			Yes	Yes	1.86 (0.92, 3.76)		
	<i>TNFβ</i>	rs3093671	No	No	1.00		
			Yes	No	2.47 (0.65, 9.43)	0.62	0.77 (-2.68, 4.22)
			Yes	Yes	0.65 (0.12, 3.45)	-0.35	
		rs769178	No	No	1.00		
			Yes	No	1.64 (0.82, 3.26)	-2.62	-2.27 (-4.41, -0.13)
			Yes	Yes	4.05 (1.04, 15.75)	2.42	2.90 (-2.47, 8.26)
	rs769177	No	No	1.00			
		Yes	No	0.59 (0.19, 1.87)	-0.41		
		Yes	Yes	2.14 (1.09, 4.21)			
rs909253		No	No	1.00			
		Yes	No	0.00 (0.00, 0.00)	-2.14	-1.73 (-3.38, -0.08)	
		Yes	Yes	0.63 (0.39, 1.00)	-0.37		
<i>HLA-DRB1*1501</i>	rs3135388	No	No	1.00			
		Yes	No	1.83 (0.67, 5.03)	0.33	0.71 (-1.31, 2.73)	
		Yes	Yes	3.64 (2.20, 6.01)	2.64		
	rs9471958	No	No	1.00			
		Yes	No	2.09 (0.84, 5.19)	4.04	1.40 (-3.87, 6.67)	
		Yes	Yes	6.12 (2.48, 15.13)			
<i>PTCRA</i>	rs6901007	No	No	1.00			
		Yes	No	0.92 (0.59, 1.42)	-0.08		
		Yes	Yes	1.91 (0.86, 4.25)			
	rs6901007	No	No	1.00			
		Yes	No	1.98 (0.76, 5.12)	0.06	0.15 (-2.03, 2.32)	
		Yes	Yes	0.98 (0.61, 1.58)	-0.02		
			No	No	2.02 (0.63, 6.49)		
			Yes	Yes	2.01 (0.94, 4.31)	-0.01	0.01 (-2.54, 2.56)

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Chr.	Gene*	rs number	Lead		OR (95% CI)	PD	RERI (95% CI)			
			Exposure	SNP						
7	<i>TCA-β</i>	rs17133575	No	No	1.00					
				Yes	1.12 (0.68, 1.82)	0.12				
			Yes	No	2.12 (1.00, 4.50)					
			Yes	1.76 (0.63, 4.98)	-0.35	-0.47 (-2.64, 1.70)				
		rs17243	No	No	1.00					
				Yes	0.62 (0.38, 1.03)	-0.38				
Yes	No		0.82 (0.29, 2.34)							
				Yes	2.05 (0.90, 4.67)	1.23	1.61 (-0.02, 3.24)			
			10	<i>IL2RA</i>	rs2104286	No	No	1.00		
							Yes	0.98 (0.62, 1.55)	-0.02	
Yes	No	2.25 (0.94, 5.39)								
			Yes	1.70 (0.68, 4.25)	-0.55	-0.53 (-2.81, 1.76)				
12	<i>VDR</i>	rs7975128	No	No	1.00					
				Yes	0.96 (0.59, 1.56)	-0.04				
			Yes	No	1.86 (0.65, 5.29)					
			Yes	2.01 (0.94, 4.31)	0.15	0.19 (-1.86, 2.24)				
		rs2248098	No	No	1.00					
				Yes	1.28 (0.73, 2.23)	0.28				
			Yes	No	2.87 (0.82, 10.10)					
					Yes	2.46 (1.04, 5.82)	-0.42	-0.69 (-4.38, 2.99)		
		rs2239182	No	No	1.00					
				Yes	1.44 (0.83, 2.51)	0.44				
			Yes	No	5.34 (1.49, 19.10)					
					Yes	2.40 (1.03, 5.60)	-2.94	-3.38 (-9.90, 3.14)		
		rs2107301	No	No	1.00					
				Yes	1.56 (0.97, 2.50)	0.56				
			Yes	No	3.50 (1.56, 7.82)					
					Yes	1.61 (0.61, 4.23)	-1.89	-2.45 (-5.40, 0.50)		
		rs1540339	No	No	1.00					
				Yes	1.35 (0.83, 2.18)	0.35				
			Yes	No	3.84 (1.52, 9.70)					
					Yes	1.64 (0.67, 4.00)	-2.20	-2.55 (-6.12, 1.02)		
		rs2239179	No	No	1.00					
				Yes	0.94 (0.59, 1.51)	-0.06				
			Yes	No	2.07 (0.71, 6.05)					
					Yes	1.91 (0.89, 4.11)	-0.16	-0.10 (-2.42, 2.22)		
rs2189480	No	No	1.00							
		Yes	1.44 (0.89, 2.32)	0.44						
	Yes	No	4.35 (1.64, 11.56)							
			Yes	1.85 (0.79, 4.33)	-2.50	-2.94 (-7.22, 1.34)				
rs3819545	No	No	1.00							
		Yes	1.28 (0.79, 2.08)	0.28						
	Yes	No	4.48 (1.64, 12.26)							

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Chr.	Gene*	rs number	Lead		OR (95% CI)	PD	RERI (95% CI)
			Exposure	SNP			
				Yes	1.75 (0.76, 4.06)	-2.72	-3.00 (-7.46, 1.46)
		rs3782905	No	No	1.00		
				Yes	0.82 (0.52, 1.30)	-0.18	
			Yes	No	1.30 (0.51, 3.32)		
				Yes	2.29 (1.03, 5.09)	0.98	1.16 (-0.71, 3.03)
		rs2239186	No	No	1.00		
				Yes	1.11 (0.68, 1.82)	0.11	
			Yes	No	2.28 (1.03, 5.04)		
				Yes	1.90 (0.68, 5.25)	-0.38	-0.50 (-2.94, 1.95)
		rs2228570	No	No	1.00		
				Yes	0.88 (0.55, 1.40)	-0.12	
			Yes	No	1.99 (0.74, 5.31)		
				Yes	1.68 (0.71, 3.98)	-0.30	-0.18 (-2.40, 2.03)
		rs2254210	No	No	1.00		
				Yes	0.92 (0.57, 1.46)	-0.08	
			Yes	No	1.85 (0.74, 4.61)		
				Yes	1.95 (0.86, 4.47)	0.11	0.19 (-1.86, 2.24)
		rs2238136	No	No	1.00		
				Yes	1.11 (0.70, 1.78)	0.11	
			Yes	No	2.50 (1.11, 5.66)		
				Yes	1.69 (0.66, 4.29)	-0.82	-0.93 (-3.22, 1.36)
		rs2853564	No	No	1.00		
				Yes	1.03 (0.63, 1.68)	0.03	
			Yes	No	1.54 (0.58, 4.08)		
				Yes	2.59 (1.14, 5.88)	1.05	1.03 (-1.21, 3.27)
		rs4760648	No	No	1.00		
				Yes	1.08 (0.67, 1.72)	0.08	
			Yes	No	2.22 (0.64, 7.68)		
				Yes	1.96 (0.88, 4.39)	-0.25	-0.33 (-3.26, 2.60)
		rs11168287	No	No	1.00		
				Yes	1.37 (0.80, 2.36)	0.37	
			Yes	No	2.64 (0.78, 8.90)		
				Yes	2.64 (1.14, 6.07)	0.00	-0.37 (-3.71, 2.96)
		rs4328262	No	No	1.00		
				Yes	1.30 (0.78, 2.15)	0.30	
			Yes	No	2.58 (0.91, 7.30)		
				Yes	2.47 (1.07, 5.70)	-0.11	-0.41 (-3.36, 2.55)
		rs4237855	No	No	1.00		
				Yes	0.89 (0.55, 1.44)	-0.11	
			Yes	No	2.17 (0.82, 5.72)		
				Yes	1.78 (0.79, 4.00)	-0.39	-0.28 (-2.51, 1.96)
		rs7136534	No	No	1.00		
				Yes	1.50 (0.95, 2.38)	0.50	

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Chr.	Gene*	rs number	Lead		OR (95% CI)	PD	RERI (95% CI)
			Exposure	SNP			
18	<i>MBP</i>	rs7299460	Yes	No	3.39 (1.42, 8.08)		
				Yes	1.77 (0.70, 4.46)	-1.62	-2.12 (-5.36, 1.12)
			No	No	1.00		
				Yes	1.34 (0.86, 2.10)	0.34	
			Yes	No	2.98 (1.19, 7.49)		
				Yes	1.94 (0.81, 4.63)	-1.04	-1.38 (-4.43, 1.66)
		rs4760658	No	No	1.00		
				Yes	0.83 (0.52, 1.32)	-0.17	
			Yes	No	1.30 (0.52, 3.25)		
				Yes	2.79 (1.15, 6.77)	1.49	1.66 (-0.85, 4.16)
			No	No	1.00		
				Yes	0.68 (0.42, 1.09)	-0.32	
		rs4516035	Yes	No	1.04 (0.38, 2.81)		
				Yes	2.21 (0.93, 5.26)	1.17	1.49 (-0.50, 3.48)
			No	No	1.00		
				Yes	0.98 (0.64, 1.49)	-0.02	
			Yes	No	1.41 (0.63, 3.14)		
				Yes	3.53 (1.32, 9.46)	2.12	2.14 (-1.18, 5.47)
		rs470724	No	No	1.00		
				Yes	1.05 (0.68, 1.64)	0.05	
			Yes	No	1.56 (0.65, 3.75)		
				Yes	2.86 (1.19, 6.85)	1.29	1.24 (-1.24, 3.72)
			No	No	1.00		
				Yes	1.37 (0.82, 2.27)	0.37	
		rs470550	Yes	No	1.96 (0.66, 5.82)		
				Yes	2.96 (1.28, 6.85)	1.00	0.63 (-2.06, 3.32)
			No	No	1.00		
				Yes	0.78 (0.50, 1.22)	-0.22	
			Yes	No	3.24 (1.37, 7.68)		
				Yes	1.01 (0.42, 2.42)	-2.23	-2.02 (-4.82, 0.78)
rs9676113	No	No	1.00				
		Yes	0.78 (0.50, 1.22)	-0.22			
	Yes	No	3.24 (1.37, 7.68)				
		Yes	1.01 (0.42, 2.42)	-2.23	-2.02 (-4.82, 0.78)		
	No	No	1.00				
		Yes	1.28 (0.80, 2.05)	0.28			
rs11661054	Yes	No	2.78 (0.94, 8.21)				
		Yes	2.27 (1.01, 5.09)	-0.51	-0.79 (-3.97, 2.38)		
	No	No	1.00				
		Yes	0.84 (0.53, 1.31)	-0.16			
	Yes	No	3.97 (1.56, 10.06)				
		Yes	1.01 (0.42, 2.41)	-2.96	-2.80 (-6.49, 0.90)		
rs4890785	No	No	1.00				
		Yes	0.84 (0.53, 1.31)	-0.16			
	Yes	No	3.97 (1.56, 10.06)				
		Yes	1.01 (0.42, 2.41)	-2.96	-2.80 (-6.49, 0.90)		
	No	No	1.00				
		Yes	1.27 (0.80, 2.00)	0.27			
rs11661755	Yes	No	2.68 (1.04, 6.87)				
		Yes	2.14 (0.94, 4.89)	-0.53	-0.80 (-3.52, 1.92)		
	No	No	1.00				
		Yes	1.27 (0.80, 2.00)	0.27			
	Yes	No	2.68 (1.04, 6.87)				
		Yes	2.14 (0.94, 4.89)	-0.53	-0.80 (-3.52, 1.92)		
rs9675994	No	No	1.00				
		Yes	1.27 (0.80, 2.00)	0.27			

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Chr.	Gene*	rs number	Lead		OR (95% CI)	PD	RERI (95% CI)
			Exposure	SNP			
				Yes	0.81 (0.51, 1.30)	-0.19	
			Yes	No	1.63 (0.71, 3.73)		
		rs8090438		Yes	2.19 (0.86, 5.58)	0.56	0.75 (-1.49, 2.98)
			No	No	1.00		
				Yes	1.05 (0.66, 1.67)	0.05	
			Yes	No	2.50 (0.94, 6.64)		
		rs8094402		Yes	1.91 (0.82, 4.44)	-0.59	-0.64 (-3.25, 1.98)
			No	No	1.00		
				Yes	1.36 (0.87, 2.13)	0.36	
			Yes	No	2.64 (1.11, 6.32)		
		rs12456341		Yes	2.16 (0.92, 5.07)	-0.49	-0.85 (-3.47, 1.78)
			No	No	1.00		
				Yes	1.01 (0.64, 1.59)	0.01	
			Yes	No	2.20 (0.87, 5.54)		
		rs17576751		Yes	2.22 (0.95, 5.15)	0.02	0.01 (-2.26, 2.29)
			No	No	1.00		
				Yes	1.01 (0.63, 1.61)	0.01	
			Yes	No	2.77 (1.03, 7.41)		
		rs3794848		Yes	1.68 (0.74, 3.80)	-1.09	-1.10 (-3.93, 1.73)
			No	No	1.00		
				Yes	1.11 (0.70, 1.75)	0.11	
			Yes	No	1.87 (0.80, 4.38)		
		rs4890875		Yes	2.49 (1.03, 6.02)	0.62	0.51 (-1.84, 2.87)
			No	No	1.00		
				Yes	0.98 (0.62, 1.55)	-0.02	
			Yes	No	1.41 (0.58, 3.45)		
		rs595997		Yes	2.62 (1.06, 6.48)	1.22	1.23 (-1.12, 3.59)
			No	No	1.00		
				Yes	0.70 (0.44, 1.13)	-0.30	
			Yes	No	2.96 (1.25, 7.00)		
		rs2974260		Yes	0.90 (0.35, 2.29)	-2.06	-1.76 (-4.36, 0.84)
			No	No	1.00		
				Yes	1.64 (0.98, 2.75)	0.64	
			Yes	No	1.91 (0.73, 4.98)		
		rs2051344		Yes	3.78 (1.56, 9.17)	1.87	1.23 (-2.01, 4.48)
			No	No	1.00		
				Yes	0.83 (0.53, 1.29)	-0.17	
			Yes	No	1.57 (0.68, 3.66)		
		rs470681		Yes	2.16 (0.90, 5.19)	0.58	0.76 (-1.23, 2.74)
			No	No	1.00		
				Yes	0.86 (0.54, 1.35)	-0.14	
			Yes	No	3.67 (1.49, 9.03)		
				Yes	0.90 (0.36, 2.24)	-2.77	-2.63 (-5.96, 0.71)

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Chr.	Gene*	rs number	Lead		OR (95% CI)	PD	RERI (95% CI)
			Exposure	SNP			
19	<i>APOE</i>	rs12967023	No	No	1.00		
				Yes	1.45 (0.90, 2.34)	0.45	
		rs4890788	Yes	No	1.64 (0.67, 3.98)		
				Yes	3.75 (1.55, 9.06)	2.11	1.66 (-1.56, 4.87)
			No	No	1.00		
				Yes	1.07 (0.67, 1.70)	0.07	
		rs7232502	Yes	No	2.26 (0.88, 5.79)		
				Yes	2.17 (0.93, 5.09)	-0.09	-0.16 (-2.58, 2.26)
			No	No	1.00		
				Yes	0.97 (0.60, 1.56)	-0.03	
		rs8096433	Yes	No	2.23 (0.79, 6.28)		
				Yes	1.87 (0.85, 4.12)	-0.36	-0.33 (-2.77, 2.11)
			No	No	1.00		
				Yes	1.84 (1.07, 3.15)	0.84	
		rs17660901	Yes	No	3.05 (0.79, 11.73)		
				Yes	2.96 (1.35, 6.47)	-0.09	-0.93 (-5.18, 3.33)
			No	No	1.00		
				Yes	0.82 (0.52, 1.29)	-0.18	
		rs429358	Yes	No	1.97 (0.87, 4.50)		
				Yes	1.60 (0.65, 3.93)	-0.37	-0.20 (-2.06, 1.66)
No	No		1.00				
	Yes		0.91 (0.55, 1.52)	-0.09			
rs7412	Yes	No	1.83 (0.88, 3.82)				
		Yes	2.14 (0.76, 6.07)	0.31	0.40 (-1.98, 2.77)		
	No	No	1.00				
		Yes	0.99 (0.53, 1.86)	-0.01			
Yes	No	1.44 (0.70, 2.97)					
	Yes	7.45 (1.78, 31.20)	6.01	6.02 (-4.56, 16.59)			

Abbreviations: *APOE*, Apolipoprotein E; CI=confidence interval; *HLA*, Human leukocyte antigen; *IL2RA*, Interleukin-2 receptor alpha; *IL7RA*, Interleukin-7 receptor alpha; MAF, minor allele frequency; *MBP*, Myelin basic protein; OR, prevalence odds ratio; PD, prevalence difference; SNP, single nucleotide polymorphism; *TCA-β*, T cell antigen receptor beta; *TNFα*, Tumor necrosis factor alpha; *TNFβ*, Tumor necrosis factor beta; *VDR*, Vitamin D receptor.