

Supplementary Table S1. *HLA-DRB1* allele carrier frequency in the RA patients and the controls.

	YORA (n=89)				YORA vs. Control				MORA (n=714)				MORA vs. Control				EORA (n=329)				EORA vs. Control				Control (n=1026)				YORA vs. EORA				YORA vs. MORA				MORA vs. EORA			
	<i>P</i>	OR	<i>P_c</i>	95%CI	<i>P</i>	OR	<i>P_c</i>	95%CI	<i>P</i>	OR	<i>P_c</i>	95%CI	<i>P</i>	OR	<i>P_c</i>	95%CI	<i>P</i>	OR	<i>P_c</i>	95%CI	<i>P</i>	OR	<i>P_c</i>	95%CI	<i>P</i>	OR	<i>P_c</i>	95%CI	<i>P</i>	OR	<i>P_c</i>	95%CI								
<i>DRB1*01:01</i>	4 (4.5)	0.0676	0.39 NS	(0.14-1.09)	102 (14.3)	0.0305	1.39 0.9468	(1.04-1.85)	54 (16.4)	0.0085	1.64 0.2458	(1.15-2.33)	110 (10.7)	0.0029	0.24 0.0669	(0.08-0.68)	0.0074	0.28 0.2142	(0.10-0.79)	0.4005	0.85 NS	(0.59-1.22)																		
<i>DRB1*03:01</i>	1 (1.1)	0.2834	3.88 NS	(0.40-37.65)	1 (0.1)	0.6483	0.48 NS	(0.05-4.61)	0 (0.0)	1.0000	0.44 NS	(0.02-8.61)	3 (0.3)	0.2129	11.17 NS	(0.45-276.56)	0.2095	8.10 NS	(0.50-130.69)	1.0000	1.39 NS	(0.06-34.10)																		
<i>DRB1*04:01</i>	7 (7.9)	0.0060	3.90 0.1726	(1.62-9.39)	52 (7.3)	3.51X10 ⁻⁷	3.58 1.09X10 ⁻⁵	(2.16-5.96)	21 (6.4)	0.0004	3.11 0.0119	(1.69-5.73)	22 (2.1)	0.6339	1.25 NS	(0.51-3.05)	0.8293	1.09 NS	(0.48-2.47)	0.6955	1.15 NS	(0.68-1.95)																		
<i>DRB1*04:03</i>	3 (3.4)	0.7916	0.73 NS	(0.22-2.38)	13 (1.8)	0.0019	0.39 0.0591	(0.21-0.72)	12 (3.6)	0.5371	0.79 NS	(0.41-1.51)	47 (4.6)	1.0000	0.92 NS	(0.25-3.34)	0.4071	1.88 NS	(0.53-6.73)	0.0828	0.49 NS	(0.22-1.09)																		
<i>DRB1*04:04</i>	0 (0.0)	1.0000	1.27 NS	(0.07-23.77)	4 (0.6)	0.7236	1.44 NS	(0.36-5.77)	0 (0.0)	0.5777	0.34 NS	(0.02-6.42)	4 (0.4)	NA	NA NA NA	1.0000	0.88 NS	(0.05-16.52)	0.3145	4.17 NS	(0.22-77.75)																			
<i>DRB1*04:05</i>	56 (62.9)	8.33X10 ⁻¹⁴	5.47 2.42X10 ⁻¹²	(3.47-8.61)	364 (51.0)	1.02X10 ⁻³¹	3.35 3.15X10 ⁻³⁰	(2.73-4.12)	146 (44.4)	2.45X10 ⁻¹²	2.57 7.11X10 ⁻¹¹	(1.98-3.34)	243 (23.7)	0.0027	2.13 0.0615	(1.31-3.44)	0.0423	1.63 NS	(1.04-2.57)	0.0532	1.30 NS	(1.00-1.69)																		
<i>DRB1*04:06</i>	8 (9.0)	0.5326	1.23 NS	(0.58-2.65)	33 (4.6)	0.0204	0.61 0.6337	(0.40-0.92)	9 (2.7)	0.0016	0.35 0.0455	(0.17-0.71)	76 (7.4)	0.0141	3.51 0.3234	(1.31-9.39)	0.1182	2.04 NS	(0.91-4.56)	0.1764	1.72 NS	(0.81-3.64)																		
<i>DRB1*04:07</i>	0 (0.0)	0.6243	0.36 NS	(0.02-6.14)	3 (0.4)	0.0510	0.28 NS	(0.08-0.99)	0 (0.0)	0.0290	0.10 0.8420	(0.01-1.66)	15 (1.5)	NA	NA NA NA	1.0000	1.14 NS	(0.06-22.17)	0.5559	3.24 NS	(0.17-62.94)																			
<i>DRB1*04:10</i>	3 (3.4)	0.7546	1.08 NS	(0.33-3.61)	34 (4.8)	0.0966	1.55 NS	(0.95-2.54)	14 (4.3)	0.3807	1.38 NS	(0.73-2.62)	32 (3.1)	1.0000	0.78 NS	(0.22-2.79)	0.7887	0.70 NS	(0.21-2.32)	0.8738	1.13 NS	(0.60-2.13)																		
<i>DRB1*07:01</i>	0 (0.0)	1.0000	0.60 NS	(0.03-10.37)	4 (0.6)	0.5767	0.64 NS	(0.20-2.08)	2 (0.6)	1.0000	0.69 NS	(0.15-3.22)	9 (0.9)	1.0000	0.73 NS	(0.03-15.38)	1.0000	0.88 NS	(0.05-16.52)	1.0000	0.92 NS	(0.17-5.05)																		
<i>DRB1*08:02</i>	4 (4.5)	0.5100	0.62 NS	(0.22-1.75)	27 (3.8)	0.0043	0.52 0.1343	(0.33-0.82)	10 (3.0)	0.0075	0.42 0.2175	(0.21-0.81)	72 (7.0)	0.5088	1.50 NS	(0.46-4.90)	0.7681	1.20 NS	(0.41-3.50)	0.5947	1.25 NS	(0.60-2.62)																		
<i>DRB1*08:03</i>	8 (9.0)	0.1563	0.56 NS	(0.27-1.19)	66 (9.2)	0.0004	0.58 0.0128	(0.43-0.79)	29 (8.8)	0.0040	0.55 0.1150	(0.36-0.84)	153 (14.9)	1.0000	1.02 NS	(0.45-2.32)	1.0000	0.97 NS	(0.45-2.09)	0.9079	1.05 NS	(0.67-1.67)																		
<i>DRB1*08:09</i>	0 (0.0)	1.0000	2.29 NS	(0.11-48.06)	0 (0.0)	0.5158	0.29 NS	(0.01-5.98)	0 (0.0)	1.0000	0.62 NS	(0.03-12.99)	2 (0.2)	NA	NA NA NA	1.0000	2.66 NS	(0.11-65.73)	1.0000	1.39 NS	(0.06-34.10)																			
<i>DRB1*08:23</i>	0 (0.0)	NA	NA NA	NA	1 (0.1)	0.4103	4.32 NS	(0.18-106.11)	0 (0.0)	NA	NA NA	NA	0 (0.0)	NA	NA NA NA	1.0000	2.66 NS	(0.11-65.73)	1.0000	1.39 NS	(0.06-34.10)																			
<i>DRB1*09:01</i>	27 (30.3)	0.5376	1.16 NS	(0.72-1.86)	188 (26.3)	0.6607	0.95 NS	(0.77-1.18)	89 (27.1)	1.0000	0.99 NS	(0.75-1.31)	280 (27.3)	0.5937	1.17 NS	(0.70-1.96)	0.4466	1.22 NS	(0.75-1.97)	0.8212	0.96 NS	(0.72-1.29)																		
<i>DRB1*10:01</i>	1 (1.1)	0.3936	2.32 NS	(0.27-20.08)	14 (2.0)	0.0045	4.08 0.1389	(1.46-11.39)	5 (1.5)	0.0693	3.15 NS	(0.91-10.95)	5 (0.5)	1.0000	0.74 NS	(0.08-6.38)	1.0000	0.57 NS	(0.07-4.37)	0.8044	1.30 NS	(0.46-3.63)																		
<i>DRB1*11:01</i>	2 (2.2)	0.5717	0.55 NS	(0.13-2.32)	23 (3.2)	0.4389	0.80 NS	(0.48-1.34)	10 (3.0)	0.5074	0.75 NS	(0.37-1.52)	41 (4.0)	1.0000	0.73 NS	(0.16-3.41)	1.0000	0.69 NS	(0.16-2.98)	1.0000	1.06 NS	(0.50-2.26)																		
<i>DRB1*12:01</i>	9 (10.1)	0.3004	1.43 NS	(0.69-2.95)	38 (5.3)	0.1134	0.71 NS	(0.48-1.07)	24 (7.3)	1.0000	1.00 NS	(0.62-1.61)	75 (7.3)	0.3793	1.43 NS	(0.64-3.20)	0.0890	2.00 NS	(0.93-4.29)	0.2082	0.71 NS	(0.42-1.21)																		
<i>DRB1*12:02</i>	3 (3.4)	1.0000	0.93 NS	(0.28-3.09)	21 (2.9)	0.4987	0.81 NS	(0.47-1.40)	12 (3.6)	1.0000	1.01 NS	(0.52-1.96)	37 (3.6)	1.0000	0.92 NS	(0.25-3.34)	0.7419	1.15 NS	(0.34-3.94)	0.5698	0.80 NS	(0.39-1.65)																		
<i>DRB1*13:01</i>	0 (0.0)	1.0000	0.67 NS	(0.04-11.69)	2 (0.3)	0.2128	0.36 NS	(0.08-1.69)	0 (0.0)	0.2108	0.18 NS	(0.01-3.16)	8 (0.8)	NA	NA NA NA	1.0000	1.59 NS	(0.08-33.43)	1.0000	2.31 NS	(0.11-48.30)																			
<i>DRB1*13:02</i>	2 (2.2)	0.0001	0.12 0.0036	(0.03-0.50)	56 (7.8)	4.83X10 ⁻⁷	0.45 1.50X10 ⁻⁵	(0.33-0.62)	30 (9.1)	0.0020	0.53 0.0575	(0.35-0.80)	163 (15.9)	0.0401	0.23 0.9212	(0.05-0.98)	0.0519	0.27 NS	(0.06-1.13)	0.4706	0.85 NS	(0.53-1.35)																		
<i>DRB1*14:02</i>	0 (0.0)	NA	NA NA	NA	2 (0.3)	0.1682	7.20 NS	(0.35-150.28)	0 (0.0)	NA	NA NA	NA	0 (0.0)	NA	NA NA NA	1.0000	1.59 NS	(0.08-33.43)	1.0000	2.31 NS	(0.11-48.30)																			
<i>DRB1*14:03</i>	2 (2.2)	0.5752	0.51 NS	(0.12-2.15)	14 (2.0)	0.0093	0.45 0.2891	(0.24-0.82)	6 (1.8)	0.0428	0.41 NS	(0.18-0.98)	44 (4.3)	0.6803	1.24 NS	(0.25-6.24)	0.6948	1.15 NS	(0.26-5.14)	1.0000	1.08 NS	(0.41-2.83)																		
<i>DRB1*14:04</i>	0 (0.0)	1.0000	1.27 NS	(0.07-23.77)	0 (0.0)	0.1488	0.16 NS	(0.01-2.96)	0 (0.0)	0.5777	0.34 NS	(0.02-6.42)	4 (0.4)	NA	NA NA NA	1.0000	1.05 NS	(0.31-3.56)	0.1638	0.61 NS	(0.32-1.16)																			
<i>DRB1*14:05</i>	0 (0.0)	0.0681	0.14 NS	(0.01-2.23)	13 (1.8)	0.0152	0.46 0.4726	(0.24-0.86)	10 (3.0)	0.6140	0.77 NS	(0.38-1.56)	40 (3.9)	0.1287	0.17 NS	(0.01-2.93)	0.3809	0.29 NS	(0.02-4.93)	0.2561	0.59 NS	(0.26-1.36)																		
<i>DRB1*14:06</i>	3 (3.4)	0.7369	1.20 NS	(0.36-4.02)	23 (3.2)	0.6689	1.14 NS	(0.66-1.99)	17 (5.2)	0.0530	1.87 NS	(1.02-3.45)	29 (2.8)	0.5876	0.64 NS	(0.18-2.24)	1.0000	1.05 NS	(0.31-3.56)	0.7731	1.15 NS	(0.64-2.05)																		
<i>DRB1*14:07</i>	0 (0.0)	1.0000	2.29 NS	(0.11-48.06)	1 (0.1)	1.0000	0.72 NS	(0.06-7.93)	0 (0.0)	1.0000	0.62 NS	(0.03-12.99)	2 (0.2)	NA	NA NA NA	1.0000	2.66 NS	(0.11-65.73)	1.0000	1.39 NS	(0.06-34.10)																			
<i>DRB1*14:54</i>	2 (2.2)	0.2232	0.38 NS	(0.09-1.60)	42 (5.9)	0.8350	1.04 NS	(0.69-1.57)	17 (5.2)	0.8898	0.91 NS	(0.52-1.58)	58 (5.7)	0.3884	0.42 NS	(0.10-1.86)	0.2158	0.37 NS	(0.09-1.55)	0.4712	0.85 NS	(0.57-1.26)																		
<i>DRB1*15:01</i>	12 (13.5)	1.0000	0.99 NS	(0.53-1.87)	81 (11.3)	0.1871	0.82 NS	(0.61-1.09)	43 (13.1)	0.8532	0.96 NS	(0.66-1.38)	139 (13.5)	1.0000	1.04 NS	(0.52-2.06)	0.5972	1.22 NS	(0.64-2.33)	0.4712	0.85 NS	(0.57-1.26)																		
<i>DRB1*15:02</i>	13 (14.6)	0.1365	0.61 NS	(0.33-1.12)	110 (15.4)	0.0008	0.65 0.0255	(0.51-0.84)	55 (16.7)	0.5000	0.72 NS	(0.52-0.99)	224 (21.8)	0.7467	0.85 NS	(0.44-1.64)	1.0000	0.94 NS	(0.50-1.75)	0.5851	0.91 NS	(0.64-1.29)																		
<i>DRB1*16:02</i>	0 (0.0)	0.3891	0.30 NS	(0.02-5.10)	9 (1.3)	0.4392	0.71 NS	(0.32-1.60)	6 (1.8)	1.0000	1.04 NS	(0.41-2.64)	18 (1.8)	0.3493	0.28 NS	(0.02-4.98)	0.6081	0.41 NS	(0.02-7.19)	0.5763	0.69 NS	(0.24-1.95)																		
<i>DRB1*04</i>	67 (75.3)	8.62X10 ⁻¹¹	4.65	(2.83-7.65)	445 (62.3)	8.59X10 ⁻²¹	2.53	(2.08-3.07)	185 (56.2)	1.46X10 ⁻⁷	1.96	(1.53-2.52)	406 (39.6)	0.0010	2.37	(1.40-4.02)	0.0190	1.84	(1.11-3.05)	0.0660	1.29	(0.99-1.68)																		
<i>DRB1*12</i>	12 (13.5)	0.4807	1.27	(0.67-2.41)	58 (8.1)	0.0590	0.72	(0.52-1.01)	35 (10.6)	1.0000	0.97	(0.65-1.45)	112 (10.9)	0.4520	1.31	(0.65-2.64)	0.1084	1.76	(0.91-3.43)	0.1988	0.74	(0.48-1.15)																		
<i>DRB1*15</i>	25 (28.1)	0.3477	0.77	(0.48-1.25)	189 (26.5)	0.0018	0.71	(0.58-0.88)	96 (29.2)	0.1555	0.82	(0.62-1.07)	344 (33.5)	0.8957	0.95	(0.56-1.59)	0.7993	1.09	(0.66-1.77)	0.3702	0.87	(0.65-1.17)																		
SE	68 (76.4)	5.80X10 ⁻¹¹	4.73	(2.85-7.84)	516 (72.3)	1.45X10 ⁻³⁹	3.81	(3.10-4.68)	226 (68.7)	5.06X10 ⁻¹⁹	3.20	(2.46-4.17)	417 (40.6)	0.1909	1.48	(0.86-2.54)	0.4507	1.24	(0.74-2.08)	0.2402	1.19	(0.89-1.58)																		

Allele carrier frequencies are shown in parenthesis (%). Association was tested with the control by Fisher's exact test using 2X2 contingency tables. RA: rheumatoid arthritis, YORA: younger age onset RA, MORA: moderate age onset RA, EORA: elder age onset RA, OR: odds ratio, CI: confidence interval, NA not