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Table S1. Previous publications about associations between HLA and ATIN

Author (reference)	Type	Year	Country	Patients (n)	Alleles or Haplotypes			
					<i>DQA1</i>	<i>DQB1</i>	<i>DRB1</i>	Others
Mackensen F et al. (11)	Article	2011	America	Uveitis (8)	—	—	*0102, *08	—
Reddy AK et al. (12)	Article	2014	America	Uveitis (15)	—	*05	*01	—
Peräsaari J et al. (6)	Article	2013	Finland	TIN (11)	*0401	*0402	*08	Control: <i>DQA1*04:01/DQB1*06:02/DRB1*15</i>
				TINU (20)	*0401, *0104	*0402	*08, *14	Case(n=31): <i>DQA1*04:01/DQB1:04:02/DRB1*08</i>
Gorroño-Echebarría et al. (8)	Article	2001	Spain	TINU (3)	—	—	<i>DR14</i>	—
Sanchez-Burson J et al. (7)	Article	2002	Spain	TINU (6)	—	*01	—	—
Levinson RD et al. (13)	Article	2003	America	TINU (18)	*0101	*0501	*0102	<i>B*14</i>
Lucy Howarth et al. (18)	Case	2004	UK	TINU (2)	—	—	*0101/02/04, <i>DR*14</i>	*A2, *B15/51, <i>CW*0701/14</i>
L JY et al. (14)	Case	2008	Australia	TINU (2)	*01	*05	*01	—
Biester S et al. (15)	Case	2010	Germany	TINU (2)	—	*0503	*1401	—
Santoro D et al. (9)	Case	2012	Italy	TINU (1)	*0102/*0102	*0603/*0603	*0101/*1359	<i>A*0278/2631, B*1517/3802,</i> <i>Cw*0701/1202</i>
Paladini A et al. (10)	Case	2013	Italy	TINU (1)	*0101/*0201	*0303/*0503	—	—
Matsumoto K et al. (16)	Case	2015	Japan	TINU (1)	—	*050101	—	<i>C*0702</i>
L-WH et al. (19)	Case	2015	China	TINU (1)	*0101/0201	*0303/*0503	—	—
Kawamata M et al. (17)	Case	2016	Japan	TINU (1)	—	*030201/*050201	*0406/*140701	—

Reference number is same as references in article. The bar (–) means unsurveyed.

Table S2. Demographic and Clinical Features of ATIN Patients

Parameters	Total ATIN (n=154)	D-ATIN (n=76)	TINU (n=38)	SS-ATIN (n=25)	IgG4-RD (n=7)	Others (n=8)	P value
Female, n (%)	102(66.2)	47(61.8)	32 (84.2)	21(84.0)	0 (0)	2(25.0)	<0.001
Age (yrs.)	47.6±12.2	47.1±12.8	49.8±8.7	43.6±13.6	58.6±7.3	45.3±13.5	0.04
Scr (μmol/L)							
Peak	254.0(173.5,428.5)	305.0(198.8,534.3) ^a	273.0(180.0,411.0) ^b	123.0(85.5,182.3)	178.0(140.0,239.3)	251.0(239.0-342.0)	<0.001
Biopsy	208.0(148.0,298.0)	239.5(161.0,352.7) ^a	229.8(170.8,338.5) ^b	107.0(82.7,166.5)	142.5(106.5,181.5)	239.0(224.0-267.0) ^c	<0.001
RRT Rate, n (%)	24(15.6)	17(22.4)	6(15.8)	1(4.0)	0(0.0)	0(0.0)	0.12
Proteinuria (g/d)	0.9(0.5,1.4)	1.0(0.6,1.6)	1.0(0.6,1.3)	0.6(0.2,1.4)	0.4(0.2,0.7)	1.2(0.1,2.1)	0.18
Renal Glycosuria, n (%)	98(63.6)	55(72.4)	33(86.8)	8(32.0)	0(0.0)	2(25.0)	<0.001
NAG (U/L)	25.0(13.0,44.0)	25.0(13.0,51.0)	30.0(13.5,45.0)	17.0(8.5,33.0)	30.0(11.0,42.0)	25.0(21.0,32.0)	0.44
α1-MG (mg/L)	143.5(47.5,230.3)	193.5(60.3,290.0) ^a	167.0(106.0,238.0) ^b	56.0(28.0,117.0)	35.0(24.0,70.0)	72.0(36.0,115.0)	0.001
Allergic History, n (%)	42(27.3)	22(28.9)	11(28.9)	5(20.0)	3(42.9)	1(12.5)	0.67
Culprit Drug History, n (%)	110(71.4)	76(100)	20(52.6)	16(64.0)	2(28.6)	2(25.0)	<0.001
Allergic Symptoms, n (%)	68(44.2)	43(56.6)	16(42.1)	6(24.0)	2(28.6)	1(12.5)	0.01
CRP (mg/L)	7.0(2.1,22.1)	9.7(3.2,22.7) ^a	18.5(6.0,31.0) ^b	1.6(1.0,2.2)	2.2(1.2,58.8)	4.2(1.9,33.0)	<0.001
Comorbidities, n (%)							
Hypertension	36(23.4)	19(25.0)	12(31.6)	1(4.0)	2(28.6)	2(25.0)	0.07
Diabetes Mellitus	22(14.3)	11(14.5)	4(10.5)	2(8.0)	2(28.6)	3(37.5)	0.18
Thyroid Diseases	25(16.2)	9(11.8)	10(26.3)	3(12.0)	1(14.3)	2(25.0)	0.26
Coronary Heart Disease	7(4.5)	4(5.5)	1(2.6)	0(0.0)	0(0.0)	2(25.0)	0.12
Autoimmune Disease	23(14.9)	2(2.6)	2(5.3)	15(60.0)	3(42.9)	1(12.5)	<0.001
Tumor	5(3.2)	4(5.5)	1(2.6)	0(0.0)	0(0.0)	0(0.0)	0.75

Abbreviations: ATIN, Acute Tubulointerstitial Nephritis; D-ATIN, Drug Induced Acute Tubulointerstitial Nephritis; TINU, Tubulointerstitial Nephritis with Uveitis Syndrome; SS-ATIN, Sjogren syndrome-related Acute Tubulointerstitial Nephritis; IgG4RD, IgG4-related Acute Tubulointerstitial Nephritis; Scr, Serum Creatinine (normal range:44-133 μmol/L); RRT, Renal Replacement Therapy; NAG, N-acetyl-β-d-glucosaminidase (normal range:0-21 U/L); α1-MG, α1-Microglobulin (normal range: 0-12 mg/L); CRP, C-Reactive Protein (normal range <8 mg/L); Others: included sarcoidosis, malignancy and etiology unknown. Allergic symptoms : Meet any one of fever, rash, arthralgia, eosinophilia. ^aD-ATIN versus SS, *P*<0.005; ^bTINU versus SS, *P*<0.005; ^cOthers versus SS, *P*<0.005 (*P*<0.005 was set as the threshold statistical significance due to ten comparisons among the five groups).

Table S3. HLA-DQA1, -DQB1, -DRB1 alleles in ATIN patients of other causes

ID	Causes	DQA1-1	DQA1-2	DQB1-1	DQB1-2	DRB1-1	DRB1-2
Case 1	Infectious	0102	0303	0602	0401	0405	1501
Case 2	Infectious	0102	0201	0602	0607	0701	1501
Case 3	Metabolic	0102	0601	0601	0301	1202	1501
Case 4	Metabolic	0301	0505	0301	0302	0406	1201
Case 5	Immune	0201	0302	0202	0303	0701	1405
Case 6	Genetic	0201	0302	0202	0303	0701	901
Case 7	Unknown	0301	0303	0302	0401	0406	1602
Case 8	Unknown	0102	0201	0602	0202	0701	1501

Table S4. The frequency of different *DQA1*, *DQB1*, and *DRB1* alleles in ATIN patients and controls

Allele	Control(N=200)	ATIN(N=154)	D-ATIN(N=76)	TINU(N=38)	SS-ATIN(N=25)	IgG4-RD(N=7)
DQA1	n=200	n=149	n=73	n=36	n=25	n=7
0101	12(6.0)	17(11.4)	7(9.6)	5(13.9)	3(12.0)	2(28.6)
0103	31(15.5)	18(12.1)	7(9.6)	4(11.1)	7(28.0)	0(0)
0105	5(2.5)	5(3.4)	1(1.4)	0(0)	3(12.0)	1(14.3)
0201	33(16.5)	28(18.8)	10(13.7)	5(13.9)	6(24.0)	3(42.9)
0301	16(8.0)	16(10.7)	8(11.0)	4(11.1)	1(4.0)	1(14.3)
0303	30(15.0)	26(17.4)	15(20.5)	4(11.1)	5(20.0)	0(0)
0501	22(11.0)	24(16.1)	14(19.2)	4(11.1)	6(24.0)	0(0)
0505	38(19.0)	16(10.7)	8(11.0)	4(11.1)	3(12.0)	0(0)
0506	3(1.5)	2(1.3)	0(0)	1(2.8)	1(4.0)	0(0)
0601	23(11.5)	20(13.4)	13(17.8)	4(11.1)	1(4.0)	1(14.3)
DQB1	n=200	n=112	n=51	n=25	n=21	n=7
0201	21(10.5)	13(11.6)	8(15.7)	1(4.0)	4(19.0)	0(0)
0202	24(12.0)	21(18.8)	5(9.8)	4(16.0)	6(28.6)	3(42.9)
0301	84(42.0)	29(25.9)	14(27.5)	6(24.0)	6(28.6)	1(14.3)
0302	17(8.5)	15(13.4)	7(13.7)	3(12.0)	1(4.8)	2(28.6)
0305	0(0)	3(2.7)	2(3.9)	1(4.0)	0(0)	0(0)
0401	21(10.5)	13(11.6)	7(13.7)	2(8.0)	2(9.5)	0(0)
0402	2(1.0)	3(2.7)	3(5.9)	0(0)	0(0)	0(0)
0501	17(8.5)	11(9.8)	5(9.8)	2(8.0)	1(4.8)	3(42.9)
0502	11(5.5)	15(13.4)	8(15.7)	4(16.0)	2(9.5)	1(14.3)
0601	27(13.5)	14(12.5)	4(7.8)	3(12.0)	6(28.6)	0(0)
0603	8(4.0)	3(2.7)	2(3.9)	0(0)	1(4.8)	0(0)
0604	0(0)	4(3.6)	1(2.0)	3(12.0)	0(0)	0(0)
0605	0(0)	1(0.9)	1(2.0)	0(0)	0(0)	0(0)
0609	6(3.0)	1(0.9)	0(0)	0(0)	0(0)	1(14.3)
DRB1	n=200	n=150	n=75	n=37	n=23	n=7
0101	9(4.5)	6(4.0)	3(4.0)	0(0)	1(4.3)	2(28.6)
0102	1(0.5)	3(2.0)	1(1.3)	1(2.7)	1(4.3)	0(0)
0301	20(10.0)	24(16.0)	12(16.0)	6(16.2)	6(26.1)	0(0)
0401	8(4.0)	4(2.7)	3(4.0)	0(0)	1(4.3)	0(0)
0402	1(0.5)	1(0.7)	1(1.3)	0(0)	0(0)	0(0)
0403	3(1.5)	9(6.0)	6(8.0)	2(5.4)	0(0)	1(14.3)
0404	1(0.5)	1(0.7)	0(0)	0(0)	1(4.3)	0(0)
0405	21(10.5)	21(14.0)	12(16.0)	4(10.8)	4(17.4)	0(0)
0406	8(4.0)	8(5.3)	2(2.7)	3(8.1)	0(0)	1(14.3)
0410	0(0)	2(1.3)	2(2.7)	0(0)	0(0)	0(0)
0701	34(17.0)	24(16.0)	9(12.0)	4(10.8)	6(26.1)	1(14.3)
0802	2(1.0)	1(0.7)	1(1.3)	0(0)	0(0)	0(0)
0803	19(9.5)	9(6.0)	6(8.0)	3(8.1)	0(0)	0(0)
1001	5(2.5)	2(1.3)	1(1.3)	0(0)	0(0)	1(14.3)
1101	25(12.5)	7(4.7)	4(5.3)	2	1(4.3)	0(0)
1104	3(1.5)	3(2.0)	3(4.0)	0(0)	0(0)	0(0)
1201	18(9.0)	7(4.7)	2(2.7)	3(8.1)	1(4.3)	0(0)
1202	23(11.5)	16(10.7)	12(16.0)	3(8.1)	0(0)	0(0)
1301	9(4.5)	5(3.3)	3(4.0)	1(2.7)	1(4.3)	0(0)
1302	13(6.5)	5(3.3)	0(0)	4(10.8)	0(0)	1(14.3)
1404	0(0)	1(0.7)	0(0)	1(2.7)	0(0)	0(0)
1407	0(0)	3(2.0)	2(2.7)	1(2.7)	0(0)	0(0)
1502	8(4.0)	4(2.7)	4(5.3)	0(0)	0(0)	0(0)
1504	0(0)	1(0.7)	0(0)	0(0)	1(4.3)	0(0)
1602	7(3.5)	7(4.7)	3(4.0)	2(5.4)	1(4.3)	0(0)

N, number of patients; n, number of patients those alleles successfully detected at certain locus. The alleles only detected in controls were omitted.