



Title	Altered Renal Pathology in an Autoimmune Disease Mouse Model After Induction of Diabetes Mellitus
Author(s)	Hiramatsu, Shiori; Ichii, Osamu; Namba, Takashi et al.
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**Table 1. Primary and secondary antibodies used in this study.**

<b>Antibody</b>	<b>Host</b>	<b>Dilution</b>	<b>Source</b>	<b>Retrieval</b>	<b>Blocking agent</b>
CD3	Rabbit	1:200	Nichirei, Tokyo, Japan	Tris 115°C 15 min	10% Goat normal serum
B220	Rat	1:1600	Cedarlane, Burlington, Canada	Tris 115°C 15 min	10% Goat normal serum
IL-36 $\alpha$	Goat	1:400	Thermo Fisher Scientific, Waltham, MA, USA	CB 115°C 15 min	5% Donkey normal serum
Insulin	Rat	1:100	R & D system, Minnesota, USA	CB 115°C 15 min	10% Goat normal serum
Glucagon	Rabbit	1:500	Abcam, Cambridge, UK	Tris 115°C 15 min	10% Goat normal serum
Rabbit IgG-biotin	Goat	Prediluted	SABPO(R) Kit, Nichirei, Tokyo, Japan		
Rat IgG-biotin	Goat	1:100	BioLegend, San Diego, CA, USA		
Rabbit IgG-Alexa Fluor 488	Donkey	1:500	Thermo Fisher Scientific, Waltham, MA, USA		
Rat IgG-Alexa Fluor 546	Donkey	1:500	Thermo Fisher Scientific, Waltham, MA, USA		

CB: 10 mM Citrate buffer (pH 6.0); Tris: 20 mM Tris-HCl (pH 9.0)

**Table 2. Primers used in this study.**

<b>Genes (Accession No.)</b>	<b>Primer sequence (5'-3') F: Forward, R: Reverse</b>	<b>Product size (bp)</b>	<b>Note</b>
<i>Il1a</i> NM_010554	F: AGATGACCTGCAGTCCATAACC R: GACAAACTTCTGCCTGACGAG	121	
<i>Il1b</i> NM_008361	F: TTCCAGGATGAGGACATGAGC R: GACAAACTTCTGCCTGACGAG	111	Inflammatory cytokine
<i>Il6</i> NM_031168	F: CAACGATGATGCACTTGCAGA R: GGTACTCCAGAAGACCAGAGGA	128	
<i>Tnf</i> NM_013693	F: TCTTCTCATTCTGCTTGTGGC R: CATAGAAGTATGAGAGGGAGGC	119	
<i>Tgfb1</i> NM_011577.2	F: ATGCTAAAGAGGTCACCCGC R: TGCTTCCCGAATGTCTGACG	119	Sclerosis
<i>Neph2</i> NM_130456.4	F: AAGGTTGATCTCCGTCTCCAG R: TTCCATGCGGTAGTAGCAGAC	105	Podocyte marker
<i>Synpo</i> NM_177340.2	F: CATCGGACCTTCTTCTGTG R: TCGGAGTCTGTGGGTGAG	90	

**Table 3. Correlation between diabetes mellitus and indices of autoimmunity or renal pathology in Yaa.**

		BGL	Urine glucose	Islets/Pancreas	Insulin/Glucagon	
		$\rho$	$\rho$	$\rho$	$\rho$	
<b>Autoimmunity</b>	SPW/BW	-0.224	-0.407	0.265	0.253	
	dsDNA	-0.329	-0.424	0.596*	0.189	
<b>Renal pathology</b>	<b>Serum</b>	BUN	-0.036	0.463	0.014	-0.168
		Cre	-0.068	-0.232	0.199	-0.120
	<b>Urine</b>	pH	-0.165	-0.050	0.312	0.263
		Specific gravity	0.241	0.033	-0.150	-0.060
		ACR	-0.499*	-0.345	0.481	0.244
		Size	-0.497	-0.282	0.435	0.177
	<b>GL</b>	Nuclear number	-0.027	-0.094	0.324	0.006
		Mesangial area	-0.577*	-0.344	0.494	0.197
		Mesangial area ratio	-0.635**	-0.344	0.597*	0.391
		<i>Neph2</i>	0.482	0.309	-0.600*	-0.589*
<i>Synpo</i>		0.197	0.270	-0.332	-0.406	
B220 <sup>+</sup> cell		-0.047	-0.263	0.650	0.320	
CD3 <sup>+</sup> cell		0.199	0.071	-0.033	-0.334	
Lumen/Cortex		0.332	0.426	-0.299	-0.559*	
<b>TIL</b>	B220 <sup>+</sup> cell	-0.512*	-0.658**	0.712**	0.629**	
	CD3 <sup>+</sup> cell	-0.600*	-0.345	0.509*	0.514*	

Spearman's rank correlation coefficient. \*:  $P < 0.05$ , \*\*:  $P < 0.01$ .  $n \geq 15$ . GL: glomerular lesion parameters, TIL: tubulointerstitial lesion parameters, BGL: average of blood glucose level from 12 to 24 weeks of age, Islets/Pancreas: area ratio of islets to pancreas, Insulin/Glucagon: area ratio of insulin<sup>+</sup> cells to glucagon<sup>+</sup> cells, SPW/BW: Ratio of spleen weight to body weight, dsDNA: Anti-dsDNA antibody, BUN: blood urea nitrogen, Cre: creatinine, ACR: urinary albumin-to-creatinine ratio, Lumen/Cortex: tubular lumen area-to-cortex area ratio.

**Table 4. Correlation between autoimmunity and renal pathology in Yaa**

			SPW/BW	dsDNA	
			$\rho$	$\rho$	
Serum	BUN		-0.121	0.068	
	Cre		0.133	0.054	
Urine	pH		-0.430	0.342	
	Specific gravity		-0.031	0.287	
	ACR		0.269	0.338	
	Size		0.162	0.621*	
Renal pathology	GL	Nuclear number	0.124	0.561*	
		Mesangial area	0.241	0.596*	
		Mesangial area ratio	0.147	0.489	
		<i>Neph2</i>	0.093	-0.380	
		<i>Synpo</i>	0.131	-0.350	
		B220 <sup>+</sup> cells	0.221	-0.336	
		CD3 <sup>+</sup> cells	0.087	0.011	
		Lumen/Cortex	-0.147	-0.05	
		TIL	B220 <sup>+</sup> cells	0.203	0.275
			CD3 <sup>+</sup> cells	0.183	0.113

Spearman's rank correlation coefficient. \*:  $P < 0.05$ , \*\*:  $P < 0.01$ .  $n \geq 15$ . GL: glomerular lesion parameters, TIL: tubulointerstitial lesion parameters, SPW/BW: Ratio of spleen weight to body weight, dsDNA: Anti-dsDNA antibody, BUN: blood urea nitrogen, Cre: creatinine, ACR: urinary albumin-to-creatinine ratio, Lumen/Cortex: tubular lumen area-to-cortex area ratio.