Supporting Information

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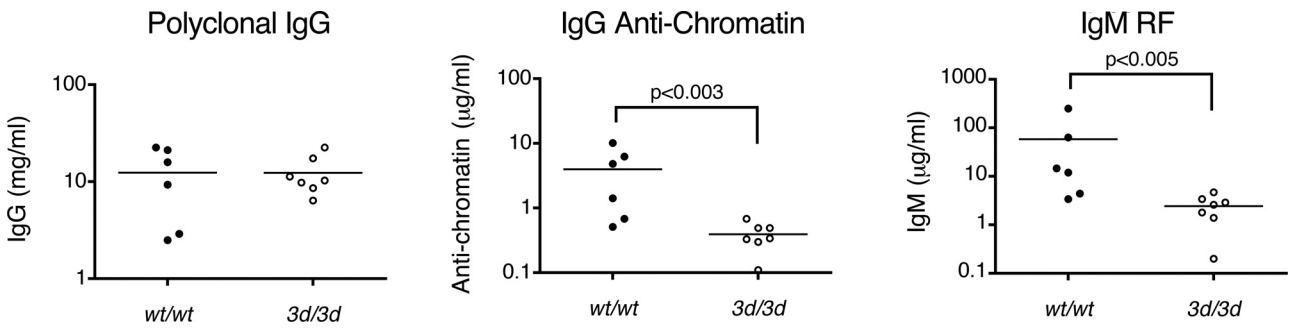

Fig. S1. IgG polyclonal and autoAbs from 14- to 15-month-old B6-*Fas*^{lpr} mice. IgG concentrations in serum were determined by ELISA in wild-type (*wt/wt*) and mutant (*3d/3d*) mice. IgM RF was anti-IgG1.

Table S1. ANA in B6-*Fas*^{lpr} *3d* mice

Unc93b1	Age (mo)	ANA
Group A		
wt/wt	5.5	4 + Homog, Meta +
wt/wt	5.5	3 + Fine Spk, Meta +
wt/wt	6.7	3 + Fine Spk, Meta +
wt/wt	7.4	3 + Fine Spk, Meta +
wt/wt	7.4	3–4 + Find Spk, Meta +
wt/3d	6.9	2 + Fine Spk, Meta +
wt/3d	7.5	3–4 + Fine Spk, Meta +
wt/3d	7.5	2–3 + Fine Spk, Meta +
wt/3d	7.6	4 + Homog, Meta +
3d/3d	6.1	Neg
3d/3d	7.2	Neg
3d/3d	7.6	Neg
3d/3d	7.6	Neg
3d/3d	7.6	Neg
3d/3d	7.6	Neg
3d/3d	7.7	Neg
Group B		
wt/wt	14.5	3–4 + Homogenous, Meta +
wt/wt	14.5	3–4 + Homogenous, Meta +
wt/wt	15.1	1–2 + Fine Spk, Meta +
wt/wt	15.1	3 + Clumpy Spk, Meta +
wt/wt	15.1	2–3 + Homogenous, Meta +
3d/3d	14.5	Neg
3d/3d	14.5	Trace Fine Spk, Meta +*
3d/3d	14.6	1 + Spk in some cells†
3d/3d	14.6	Neg‡
3d/3d	14.6	Neg
3d/3d	14.8	Neg
3d/3d	14.8	Neg

ANA staining was performed with 1/100 serum dilution and anti-IgG-FITC. All positive nuclear staining patterns are consistent with anti-chromatin. Trace amounts of staining are considered negative. Homog, homogeneous; Meta, metaphase; Spk, speckled; Neg, negative. Unusual staining patterns for mice are shown in footnotes below.
*Metaphase chromosomes positive with only faint staining of other nuclear components.
†Human anti-PCNA-like pattern.
‡1 + Golgi apparatus, but no nuclear staining.

Table S2. Lymph node and spleen T cell populations in young and old B6-*Fas*^{lpr} *3d* mice

Unc93b1	Body (g)	Organ (mg)	Cell no. ($\times 10^6$)	T cells (%)	CD4 (%)	CD8 (%)	DN (%)	CD8 CD62L$^+$ (%)	CD8 CD44^{hi} (%)
Spleen									
Young *wt*	11.0 ± 0.7	49 ± 5	33.3 ± 5.2	22.0 ± 1.0	52.9 ± 0.6	32.1 ± 0.1	13.6 ± 0.6	92.7 ± 0.4	41.1 ± 2.8
Young *3d*	13.4 ± 0.3	46 ± 3	25.3 ± 3.7	25.7 ± 1.9	54.5 ± 0.5	30.3 ± 0.6	14.0 ± 0.6	93.7 ± 0.4	28.9 ± 0.7
P-value	0.02					0.01			<0.0001
Old *wt*	23.9 ± 1.1	340 ± 90	103.4 ± 32.2	36.8 ± 2.	51.6 ± 3.3	23.2 ± 3.4	23.4 ± 1.4	18.0 ± 4.3	85.8 ± 3.3
Old *3d*	29.7 ± 1.5	90 ± 10	48.9 ± 4.5	18.8 ± 1.3	46.2 ± 3.1	24.2 ± 3.4	28.0 ± 2.1	34.7 ± 4.9	80.7 ± 6.0
P-value	0.007	0.01	0.07	<0.0001				0.03	
Lymph nodes									
Young *wt*		19 ± 3	4.3 ± 0.9	69.8 ± 1.7	56.1 ± 1.0	40.2 ± 0.9	2.4 ± 0.2	95.3 ± 0.4	22.0 ± 2.7
Young *3d*		21 ± 2	8.4 ± 1.6	64.1 ± 2.1	54.6 ± 0.4	38.3 ± 3.2	3.2 ± 0.2	96.5 ± 0.3	14.3 ± 0.9
P-value									0.0005
Old *wt*		596 ± 175	105 ± 32	71.1 ± 4.1	37.6 ± 2.3	19.6 ± 3.1	40.3 ± 5.1	41.3 ± 6.8	76.5 ± 3.8
Old *3d*		310 ± 68	113 ± 27	66.4 ± 3.4	12.9 ± 1.4	10.4 ± 1.9	74.1 ± 2.7	68.2 ± 6.1	66.4 ± 4.2
P-value					<0.0001	0.02	<0.0001	0.01	

LN includes cervical, axillary, inguinal, and mesenteric. CD4, CD8, and DN T cell data are expressed as a percentage of T cells; CD62L$^+$ and CD44^{hi} subsets are the percentage of CD8 T cells. Young mice were 25–29 days old, $n = 4$/group. Old mice were 14.5–15.1 months old, $n = 6$–7/group. *P*-values < 0.05 are shown

Table S3. Splenic B cell populations in young and old B6-*Fas*^{lpr} *3d* mice

Unc93b1	B cells (%)	B cells (no.)	Follicular CD21^{lo}CD23^{hi} (%)	Marginal zone CD21^{hi}CD23^{lo} (%)	CD21^{lo}CD23^{lo} total (%)	CD21^{lo}CD23^{lo} IgM− subset (%)	Plasma cells CD138^{+} B220− (%)
Young wt	58.2 ± 0.7	19.4 ± 3.2	64.9 ± 0.8	3.8 ± 0.2	27.2 ± 0.3	17.1 ± 1.1	2.4 ± 0.2
Young *3d*	57.8 ± 1.1	14.6 ± 2.2	72.9 ± 1.2	4.3 ± 0.2	19.9 ± 1.3	17.5 ± 0.1	2.6 ± 0.2
P-value			0.0007		0.0006		
Old wt	19.6 ± 5.0	24.1 ± 11.6	32.5 ± 7.7	15.3 ± 5.5	45.4 ± 13.8	51.9 ± 7.4	8.6 ± 2.8
Old *3d*	63.2 ± 4.1	31.6 ± 4.1	66.3 ± 3.1	15.9 ± 2.2	10.6 ± 2.8	37.2 ± 3.9	3.0 ± 0.8
P-value	0.00002		0.0005		0.01	0.06	0.03

Follicular, marginal zone, and CD21^{lo}CD23^{lo} subsets are expressed as a percentage of B cells; IgM− cells are shown as a percentage of the CD21^{lo}CD23^{lo} subset. For young mice, calculated numbers of CD21^{lo}CD23^{lo} B cells per spleen were significantly greater in wt mice (5.3 ± 0.9 versus 2.9 ± 0.3 × 10^6 cells/spleen, $P = 0.025$), while numbers of follicular B cells were not significantly different (12.5 ± 1.9 versus 10.7 ± 1.7 × 10^6 cells/spleen, $P = 0.5$). See Table S2 legend for ages and number of mice.

Table S4. ANA in male BXSB *3d* mice

Unc93b1	Age (mo)	ANA
wt/wt	2.1	2 + Fine Spk, Meta +
wt/wt	2.1	2–3 + Fine Spk, Meta +
wt/wt	2.6	1 + Fine Spk
wt/wt	2.6	1–2 + Fine Spk
3d/3d	2.6	Neg
3d/3d	3.0	Neg
3d/3d	3.3	Neg
3d/3d	3.6	Neg
3d/3d	4.3	Neg
3d/3d	4.5	Neg
3d/3d	6.0	Neg
3d/3d	7.1	Neg

ANA staining was performed with 1/100 serum dilution and anti-IgG-FITC. All positive nuclear staining patterns are consistent with anti-chromatin. Meta, metaphase; Spk, speckled; Neg, negative.

Table S5. ANA in B6-*Fas*^{lpr} *3d* mice treated with lipid A

Lipid A treated	Age (mo)	ANA
wt/wt	3.2	1–2 + Fine Spk, Meta +*
wt/wt	4.1	2–3 + Fine Spk, Meta +*
wt/wt	5.5	4 + Homog (strong), Meta +
wt/wt	5.5	4 + Homog (strong), Meta +
3d/3d	6.0	Neg
3d/3d	6.0	Neg
3d/3d	6.1	Neg

ANA staining was performed with 1/100 serum dilution and anti-IgG-FITC. All positive nuclear staining patterns are consistent with anti-chromatin. Lipid A was administered twice weekly for 2 months. Homog, homogeneous; Meta, metaphase; Spk, speckled; Neg, negative.

*Two lipid A-treated *wt* mice had early mortality requiring measurement of serum samples drawn at earlier time points.