

Table S1: Summary of most relevant clinical parameters in EAE mice. Related to Figures 1, 2, 6 and 7.

| Expt type | Strains used | Expt # | Incidence % (n) | Onset day | Onset Score | Peak Day | Peak Score | Chronic Score | Mortality (%) |
|--|--|-----------|-----------------|-----------------|-------------|-------------------|--------------------|-------------------------|-------------------------|
| PB/PC-less mice | WT | 1 | 100 (7/7) | 12 | 1.6 | 15 | 10.2 | 8 | 0 (0/7) |
| | AID ^{cre} Blimp ^{fl/fl} | | 100 (6/6) | 11 | 4.5 | 14 | 12.25 ^c | 10.5 ^b | 50 (3/6) ^c |
| | WT | 2 | 100 (5/5) | 12 | 4.5 | 16 | 10.2 | 7.3 | 0 (0/5) |
| | AID ^{cre} Blimp ^{fl/fl} | | 100 (6/6) | 8 ^b | 2.7 | 14 | 13 ^b | 10.5 ^b | 16.6 (1/6) ^c |
| | WT | 3 | 100 (8/8) | 11 | 2.1 | 14 | 8.0 | 7.0 | 0 (0/8) |
| | AID ^{cre} Blimp ^{fl/fl} | | 100 (9/9) | 11 | 1.5 | 15 | 11.4 ^c | 10.2 ^b | 0 (0/9) |
| | CD19 ^{cre} Blimp ^{fl/fl} | | 100 (8/8) | 11 | 2.8 | 15 | 12.6 ^c | 10.0 ^b | 0 (0/8) |
| | WT | 4 | 100 (6/6) | 13 | 2.5 | 15 | 9.5 | 9 | 0 (0/6) |
| | AID ^{cre} Blimp ^{fl/fl} | | 100 (7/7) | 11 ^a | 1.7 | 15 | 11.3 ^c | 10.6 ^a | 14.2 (1/7) ^a |
| | CD19 ^{cre} Blimp ^{fl/fl} | | 100 (7/7) | 11 ^a | 1.4 | 16 | 11.5 ^c | 10.9 ^a | 14.2 (1/7) ^a |
| WT | 4* | 100 (6/6) | 13 | 1.2 | 15 | 4 | 3.7 | 0 (0/6) | |
| AID ^{cre} Blimp ^{fl/fl} | | 100 (7/7) | 11 ^a | 1 | 15 | 5.2 ^a | 4.5 ^a | 14.2 (1/7) ^a | |
| CD19 ^{cre} Blimp ^{fl/fl} | | 100 (7/7) | 12 | 1 | 15 | 5.2 ^a | 5 ^b | 14.2 (1/7) ^a | |
| PB/PC-less mice + Gut-cell transfer | CD19 ^{cre} Blimp ^{fl/fl} + B cells | 1 | 100 (5/5) | 10 | 2 | 14 | 13 ^b | 13 ^b | 20 (1/5) ^a |
| | CD19 ^{cre} Blimp ^{fl/fl} + PC | | 100 (3/3) | 11 | 1 | 15 | 9.5 | 7.5 | 0 (0/3) |
| | CD19 ^{cre} Blimp ^{fl/fl} + B cells | 2 | 100 (5/5) | 13 ^b | 2 | 12 ^a | 10.1 | 9.3 ^b | 20 (1/5) ^a |
| | CD19 ^{cre} Blimp ^{fl/fl} + PC | | 100 (5/5) | 9 | 1.5 | 14 | 9.3 | 7.6 | 0 (0/5) |
| | CD19 ^{cre} Blimp ^{fl/fl} + B cells | 3 | 100 (4/4) | 10 | 2.5 | 14 ^a | 12.5 | 9.5 ^b | 0 (0/4) |
| | CD19 ^{cre} Blimp ^{fl/fl} + PC | | 100 (3/3) | 11 | 1 | 16 | 9.0 | 7.5 | 0 (0/3) |
| | CD19 ^{cre} Blimp ^{fl/fl} + B cells | 3* | 100 (4/4) | 11 | 1 | 15 | 5.1 | 5.2 ^b | 0 (0/4) |
| | CD19 ^{cre} Blimp ^{fl/fl} + PC | | 100 (3/3) | 11 | 1 | 15 | 4.2 | 4 | 0 (0/3) |
| Jht ^{-/-} + PBS | 1 | 100 (4/4) | 11 | 1.5 | 15 | 12.5 ^b | 10.5 ^b | 25 (1/4) ^a | |
| Jht ^{-/-} + PC | | 100 (3/3) | 11 | 1.5 | 15 | 8.5 | 8 | 0 (0/3) | |
| Jht ^{-/-} + PBS | 2 | 100 (4/4) | 10 | 1.5 | 14 | 12 ^b | 8.5 ^b | 0 (0/3) | |
| Jht ^{-/-} + PC | | 100 (3/3) | 10 | 1.0 | 14 | 8 | 7.0 | 0 (0/3) | |

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|---|---|-----------|-------------|-----------------|------------------|------------------|-------------------|-------------------|-------------------------|
| | Jht ^{-/-} + PBS | 3 | 100 (4/4) | 11 | 1.0 | 15 | 13 ^b | 11 ^b | 0 (0/3) |
| | Jht ^{-/-} + PC | | 100 (3/3) | 11 | 1.0 | 15 | 8.0 | 7.5 | 0 (0/3) |
| | Jht ^{-/-} + PBS | 3* | 100 (4/4) | 10 | 1 | 15 | 5.5 ^a | 5 ^a | 0 (0/3) |
| | Jht ^{-/-} + PC | | 100 (3/3) | 11 | 1 | 15 | 4.5 | 4 | 0 (0/3) |
| BAFF-Tg mice (+/- IL10) | WT | 1 | 100 (7/7) | 12 | 1.6 | 14 | 10.6 | 10.8 | 0 (0/7) |
| | BAFF-Tg ^{+/+} | | 0 (0/3) | ND | 0.5 | ND | 0.5 ^b | 0.5 ^b | 0 (0/3) |
| | BAFF-Tg ^{+/-} | | 100 (9/9) | 12 | 1.2 | 16 ^a | 4.2 ^c | 2.9 ^c | 0 (0/9) |
| | WT | 2 | 100 (4/4) | 9 | 1.0 | 13 | 10.3 | 7.8 | 0 (0/4) |
| | BAFF-Tg ^{+/+} | | 0 (4/4) | ND | ND | ND | 0.5 ^b | 0.5 ^b | 0 (0/4) |
| | BAFF-Tg ^{+/-} | | 100 (9/9) | 10 | 1.1 | 16 ^c | 5.1 ^c | 3.0 ^c | 0 (0/9) |
| | WT | 3 | 100 (5/5) | 11 | 1.1 | 14 | 10.4 | 8.7 | 0 (0/5) |
| | BAFF-Tg ^{+/+} | | 0 (7/7) | ND | ND | ND | 0.5 ^b | 0.5 ^c | 0 (0/7) |
| | BAFF-Tg ^{+/-} | | 100 (5/5) | 14 ^b | 1.5 | 16 ^a | 4.8 ^b | 2.6 ^c | 0 (0/5) |
| | WT (Different vivarium) ^d | 4 | 100 (11/11) | 10 | 1 | 17 | 3.5 | 3.5 | 0 (0/11) |
| | BAFF-Tg ^{+/+} (Different vivarium) ^d | | 100 (9/9) | 16 ^b | 1 | 17 | 1 | 1 | 0 (0/9) |
| | WT | 1 | 100 (3/3) | 9 | 1.7 | 14 | 7 | 5 | 0 (0/5) |
| BAFF-Tg ^{+/-} x IL10 ^{-/-} | | 100 (3/3) | 8 | 1.2 | 12 | 8.8 | 6.1 | 0 (0/5) | |
| BAFF-Tg ^{+/-} x IL10 ^{+/-} | | 100 (3/3) | 9 | 1.0 | 14 | 3 ^c | 3 ^c | 0 (0/5) | |
| WT | 2 | 100 (5/5) | 9 | 1.1 | 12 | 8.6 | 6.4 | 0 (0/5) | |
| BAFF-Tg ^{+/-} x IL10 ^{-/-} | | 100 (5/5) | 8 | 1.2 | 12 | 10.4 | 8.1 | 0 (0/5) | |
| BAFF-Tg ^{+/-} x IL10 ^{+/-} | | 100 (5/5) | 9 | 1.1 | 14 | 2.5 ^c | 2.5 ^c | 0 (0/5) | |
| Mice that lack <i>Il10</i> in the PB/PC compartment | WT x IL10 ^{-/-} → PC ^{-/-} | 1 | 100 (4/4) | 11 | 1.5 | 16 | 14.2 | nd | 0 (0/4) |
| | IL10 ^{-/-} x PC ^{-/-} → PC ^{-/-} | | 100 (10/10) | 11 | 1.7 | 16 | 11.8 ^b | nd | 20 (2/10) ^a |
| | WT x IL10 ^{-/-} → PC ^{-/-} | 2 | 100 (4/4) | 11 | 1.6 | 15 | 10 | nd | 0 (0/4) |
| | IL10 ^{-/-} x PC ^{-/-} → PC ^{-/-} | | 100 (6/6) | 11 | 1.7 | 15 | 11.8 | nd | 16.6(1/6) ^a |
| IgA-deficient mice | WT → Jht ^{-/-} | 1 | 100 (8/8) | 10 | 1.7 ^c | 15 | 10.6 | 10 | 0 (0/8) |
| | IgA ^{-/-} → Jht ^{-/-} | | 100 (12/12) | 9 | 3.7 ^c | 13 ^a | 11.29 | 10.6 | 0 (0/12) |
| | WT → Jht ^{-/-} | 2 | 100 (6/6) | 11 | 1.6 ^a | 15 | 9.8 | 8.6 | 0 (0/6) |
| | IgA ^{-/-} → Jht ^{-/-} | | 100 (11/11) | 10 | 2.0 ^a | 13 ^a | 9.4 | 9.0 | 0(0/11) |
| Mice that lack <i>Nos2</i> in | WT x Jht ^{-/-} → Jht ^{-/-} | 1 | 100 (7/7) | 11 | 1.6 | 14 | 13.4 | 8.75 | 14.3 ^a (1/7) |
| | NOS2 ^{-/-} x Jht ^{-/-} → Jht ^{-/-} | | 100 (7/7) | 11 | 1.7 | 14 | 13.7 | 11.6 ^c | 57.1 ^a (4/7) |

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|---|---|-----------|-------------|-----|-----|------------------|-------------------|--------------------|-------------------------|
| the B cell compartment or the PB/PC compartment | WT x Jht ^{-/-} → Jht ^{-/-} | 2 | 100 (7/7) | 12 | 1.8 | 15 | 10 | 9.07 | 14.3 ^a (1/7) |
| | NOS2 ^{-/-} x Jht ^{-/-} → Jht ^{-/-} | | 100 (10/10) | 12 | 1.2 | 15 | 11.8 | 11.2 ^c | 30 ^a (4/7) |
| | WT x NOS2 ^{-/-} → WT | 3 | 100 (8/8) | 11 | 2.7 | 15 | 12.5 | 8.5 | 25 (2/8) |
| | NOS2 ^{-/-} → NOS2 ^{-/-} | | 100 (6/6) | 11 | 1.7 | 15 | 14 ^c | 11.08 ^b | 66.7 (4/6) ^b |
| | NOS2 ^{-/-} x Jht ^{-/-} → Jht ^{-/-} | | 100 (9/9) | 11 | 1.5 | 15 | 12.6 | 10.2 ^b | 33.3 (3/9) ^a |
| | WT x Jht ^{-/-} → WT | | 100 (10/10) | 11 | 2.0 | 15 | 13.0 | 8.4 | 10 (1/10) |
| | WT x Jht ^{-/-} → Jht ^{-/-} | 4 | 100 (8/8) | 11 | 1.1 | 15 | 12.4 | 8.25 | 0 (0/8) |
| | NOS2 ^{-/-} x Jht ^{-/-} → Jht ^{-/-} | | 100 (15/15) | 11 | 1.2 | 15 | 12.4 | 11 ^c | 13.3 (2/15) |
| | NOS2 ^{-/-} x WT → Jht ^{-/-} | 5 | 100 (7/7) | 10 | 1.1 | 14 | 9.35 | 9 | 0 (0/7) |
| | NOS2 ^{-/-} x CD19 ^{cre} Blimp ^{fl/fl} → Jht ^{-/-} | | 100 (7/7) | 9 | 1.8 | 14 | 11.8 ^b | 10.8 ^c | 0 (0/7) |
| NOS2 ^{-/-} x WT → Jht ^{-/-} | 100 (7/7) | | 10 | 1.2 | 14 | 3.8 | 3.6 | 0 (0/7) | |
| NOS2 ^{-/-} x CD19 ^{cre} Blimp ^{fl/fl} → Jht ^{-/-} | 5* | 100 (7/7) | 9 | 1.0 | 14 | 5.1 ^b | 5.0 ^b | 0 (0/7) | |

All values indicate mean

^ap<0.05

^bp<0.005

^cp<0.0005

^d5-point clinical score systems (performed in a different lab)

*Refers to experiments where the 5-point clinical score system was used in parallel.

ND = No detectable disease

nd= not determined, mice had to be euthanized due to ethical reasons.