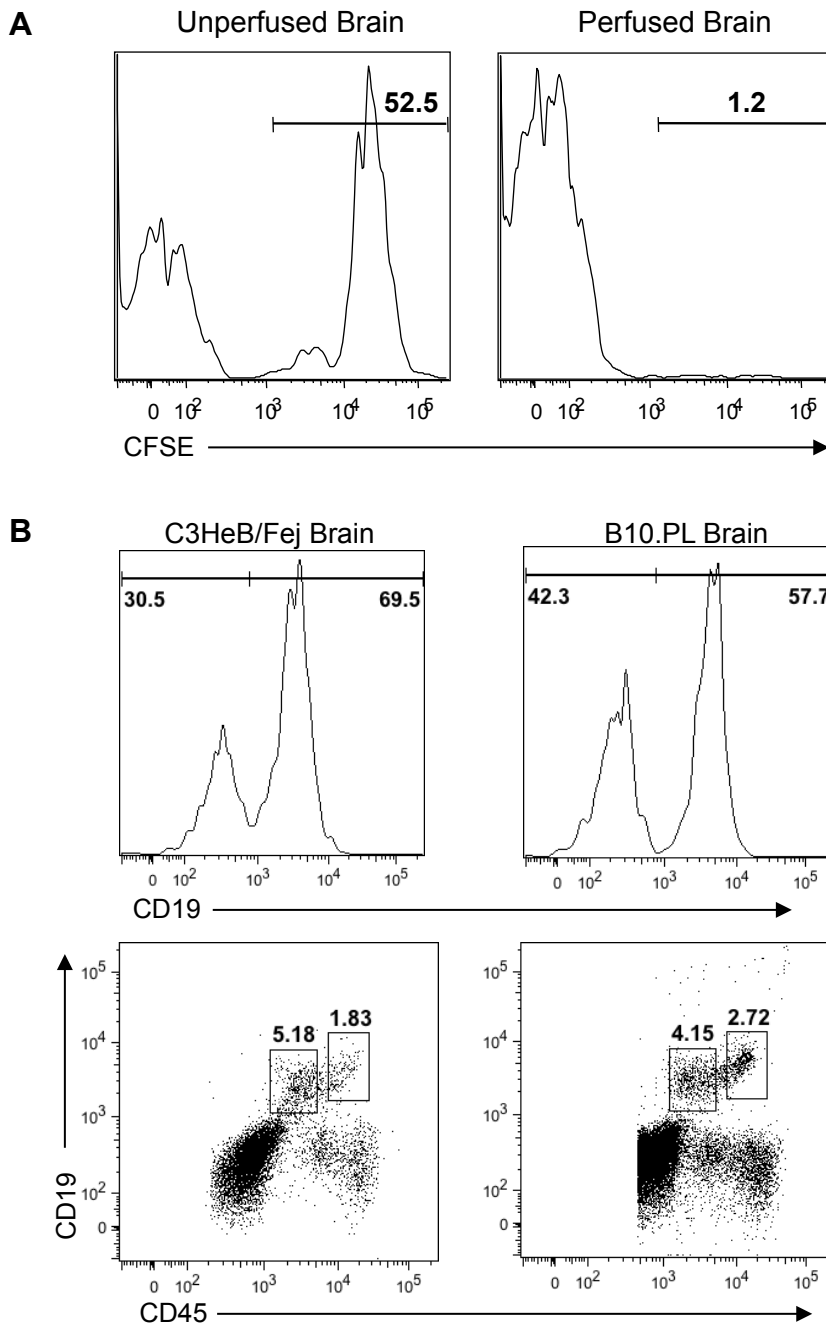


**Figure S1. MOG-specific T cell priming is impaired in  $\mu$ MT mice.**

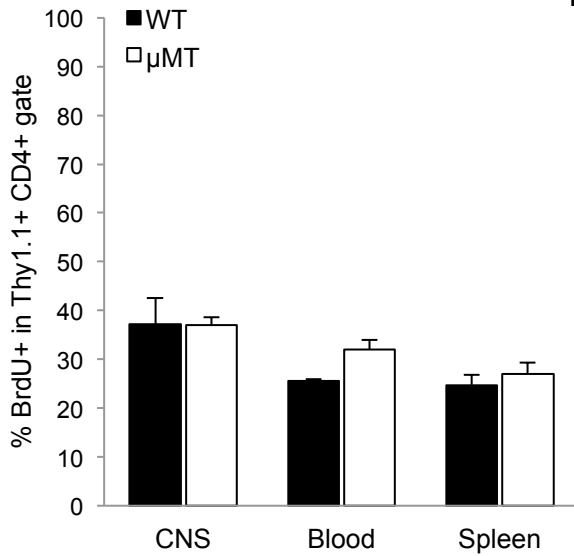
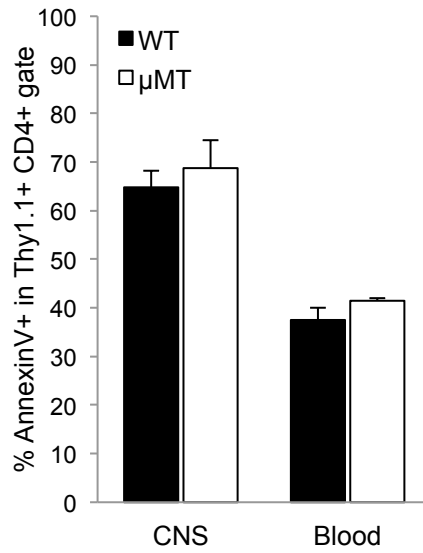
Splenocytes were isolated from C3HeB/Fej WT and  $\mu$ MT mice 7 days after mice were immunized with rMOG and injected with pertussis toxin. Cells were stimulated in ELISPOT assays with rMOG or MOG<sub>79-90</sub> or MOG<sub>97-114</sub> peptides to detect the number of IFN- $\gamma$ - and IL-17-producing cells per million splenocytes. Each data point represents a single mouse. Data were pooled from 3 independent experiments. \* $P < 0.05$ , \*\* $P < 0.005$ , Student's  $t$  test.



**Figure S2. Perfusion efficiency and comparison of CNS B cell subsets in perfused C3HeB/Fej and B10.PL mice.**

**(A)** Absence of blood contamination in CNS cells from perfused mice was confirmed by injecting CFSE-labeled splenocytes 1 hour prior to isolation of mononuclear cells from brains of unperfused or perfused mice. Flow cytometric analysis of CFSE labeled cells through the CD45<sup>+</sup>MHC class II<sup>+</sup>CD19<sup>+</sup> B cell gate is shown. Data are representative of two experiments.

**(B)** Mononuclear cells were isolated from the brains of perfused naïve C3HeB/Fej and B10.PL mice and stained for CD45, MHC class II (either I-A<sup>k</sup> or I-A<sup>u</sup>), and CD19. Representative histograms of CD19 expression are shown through the CD45<sup>+</sup>MHC class II<sup>+</sup> gate (top), and analysis of CD45<sup>+</sup> and CD19<sup>+</sup> expression is shown through the CD45<sup>+</sup> gate (bottom). Data are representative of three experiments.

**A****B**

**Figure S3. MOG-specific T cells exhibit similar levels of proliferation and apoptosis in the CNS of wild-type and B cell-deficient recipients.**

Activated MOG-specific Thy1.1<sup>+</sup> T cells were transferred into WT or μMT Thy1.2 recipients. BrdU was injected on day 4 post-transfer. CNS mononuclear cells were isolated on day 5 and analyzed for percentages of (A) BrdU<sup>+</sup> or (B) AnnexinV<sup>+</sup> cells among gated Thy1.1<sup>+</sup> CD4<sup>+</sup> donor cells (means ± SEM, n ≥ 4 mice per group). Data are representative of 3 independent experiments.

Gene <sup>a</sup>	D5 <sup>b</sup>	EAE <sup>b</sup>	Forward primer (5'-3') <sup>c</sup>	Reverse primer (5'-3') <sup>c</sup>
IL-17A	Y	Y	CTCAAAGCTCAGCGTGTCCAAACA	TATCAGGGTCTTCATTGCGGTGGA
IFN- $\gamma$	Y	Y	AACGCTACACACTGCATCTTGG	GCCGTGGCAGTAACAGCC
GM-CSF	Y	Y	CACCCGGCCTTGGAAAGCATGTAGA	GCATGTCATCCAGGAGGTTCA
TNF $\alpha$	Y	Y	GCACAGAAAGCATGACCCG	GCCCCCATCTTTTGGG
IL-6	Y	Y	GCTACCAAACCTGGATATAATCAGG	CCAGGTAGCTATGGTACTCCAGAA
IL-1 $\beta$	Y	Y	TGTAATGAAAGACGGCACACC	TCTTCTTTGGGTATTGCTTGG
IL-10	N	Y	GGTTGCCAAGCCTTATCGGA	ACCTGCTCCACTGCCTTGCT
IL-12 p35	N	N	AAATGAAGCTCTGCATCCTGC	TCACCCTGTTGATGGTCACG
IL-23 p19	N	Y	GAACAAGATGCTGGATTGCAGAG	TGTGCGTTCAGGCTAGCA
LT $\alpha$	N	Y	GTGCCTTTCTCCGACATGG	GGTAGATGGGAGTGGGAATGG
LT $\beta$	N	Y	TCCAATGCTTCCAGGAATCTAGC	GATCTGGTGTAGAATCCGCAG
VCAM	N	Y	TGGTGAAATGGAATCTGAACC	CCCAGATGGTGGTTTCCTT
ICAM	Y	Y	CCCACGCTACCTCTGCTC	GATGGATACCTGAGCATCACC
E-selectin	Y	Y	TCCTCTGGAGAGTGGAGTGC	GGTGGGTCAAAGCTTCACAT
P-selectin	Y	Y	GTGCAGAGCGGTCAAATGC	CTGAGAGCTTTCTTAGCAGAGC
iNOS	N	Y	TTGATGTGCTGCCTCTGGTCTTGC	AGCTCCTGGAACCACTCGTACTT
CCL1	N	Y	CCCCTGAAGTTTATCCAGTGTTA	GCAGCTTTCTCTACCTTTGTTC
CCL2	Y	Y	CCACTCACCTGCTGCTACT	TCTGGACCCATTCTTCTTG
CCL3	N	Y	TGTACCATGACACTCTGCAAC	CAACGATGAATTGGCGTGGAA
CCL4	Y	Y	TCTTGCTCGTGGCTGCCT	GGGAGGGTCAGAGCCCA
CCL5	N	Y	TTGCCTACCTCTCCCTCG	CGACTGCAAGATTGGAGCACT
CCL6	N	Y	CAAAGAAGGGCATGGAAGTCTG	ATCCCTTAGGACCGTGATCAAC
CCL7	Y	Y	CAAAGAAGGGCATGGAAGTCTG	ATCCCTTAGGACCGTGATCAAC
CCL9	N	Y	CTCACAACCACGGACCTAC	TGTGTAGTCATTGAGGTCAGC
CCL19	N	Y	TGTGGCCTGCCTCAGATTAT	AGTCTTCCGCATCATTAGCAC
CCL20	Y	Y	TTTTGGGATGGAATTGGACAC	TGCAGGTGAAGCCTTCAACC
CXCL1	Y	Y	CTGCACCCAAACCGAAGTC	AGCTTCAGGGTCAAGGCAAG
CXCL2	Y	Y	CGCTGTCAATGCCTGAAG	GGCGTCACACTCAAGCTCT
CXCL9	Y	Y	AATGCACGATGCTCCTGCA	AGGTCTTTGAGGGATTTGTAGTG
CXCL10	Y	Y	GCCGTCATTTTCTGCCTCA	CGTCCTTGCGAGAGGGATC
MMP3	N	Y	TTGTTCTTTGATGCAGTCAGC	GATTTGCGCCAAAAGTGC
MMP8	N	Y	AACGGGAAGACATACTTCTTCATA	TGGGTTTCATGGATCTTCTTTG
MMP9	N	Y	ACGACATAGACGGCATCCA	GCTGTGGTTCAGTTGTGGTG

**Table S1. Expression of genes analyzed by RT-qPCR in preclinical and acute EAE**

<sup>a</sup>Genes whose expression was analyzed by RT-qPCR in the brains of WT recipients of MOG-specific T cells on day 5 post-transfer and after onset of EAE. <sup>b</sup>(Y) denotes genes that were induced relative to healthy controls at the indicated time point. <sup>c</sup>Primers used to detect each gene are shown.