

SUPPLEMENTAL MATERIAL

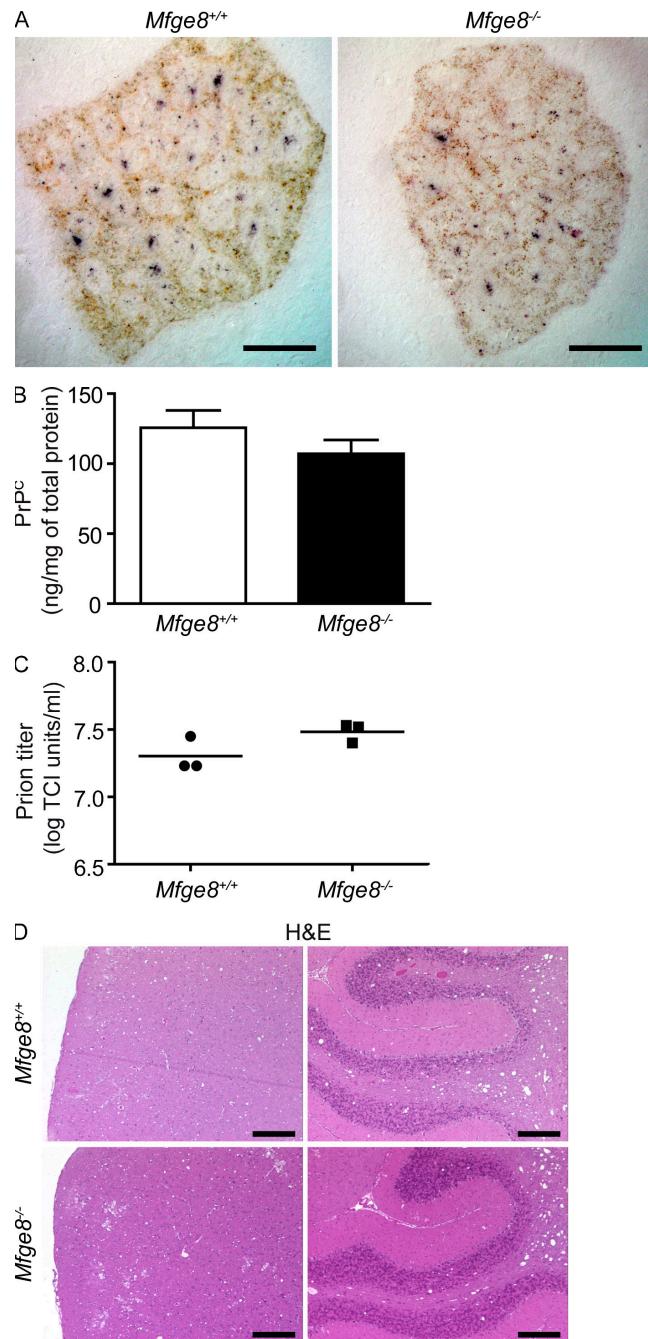
Kranich et al., <http://www.jem.org/cgi/content/full/jem.20092401/DC1>

Figure S1. PrP^{Sc} accumulation in spleen, PrP^C quantitation, and analysis of spongiosis. (A) Histoblots of spleens from mice receiving a low dose of prions. *Mfge8^{-/-}* and *Mfge8^{+/+}* mice showed accumulation of PK-resistant PrP^{Sc} on FDCs. (B) PrP^C levels of noninfected *Mfge8^{+/+}* and *Mfge8^{-/-}* brain homogenates ($n = 4$) were quantified by ELISA. PrP^C levels ranged from 100 to 140 ng per mg of total protein (P = NS). No significant differences were observed between *Mfge8^{+/+}* and *Mfge8^{-/-}* mice. Error bars represent SD. (C) Infectivity titers of *Mfge8^{+/+}* and *Mfge8^{-/-}* brain homogenates from terminally sick mice ($n = 3$) were measured by SCA. *Mfge8^{+/+}* brains (7.30 ± 0.12 TCI units) and *Mfge8^{-/-}* brains (7.48 ± 0.07 TCI units; P = NS) are shown. (D) Spongiform changes were analyzed on brain cryosections from terminal *Mfge8^{+/+}* and *Mfge8^{-/-}* mice by hematoxylin and eosin (H&E) staining. One out of three (C) or four (A, B, and D) independent experiments is shown. Bars: (A) 1 mm; (D) 100 μ m.



Figure S2. Microglia do not express *Mfge8*. ISH for *Mfge8* was performed on *Mfge8*^{+/+} brain sections, which were costained with IB4 to visualize microglia. DAPI was used as nuclear counterstaining. Black arrows point to *Mfge8*-expressing cells, and red arrows point to IB4⁺ microglia. Bar, 100 μ m.

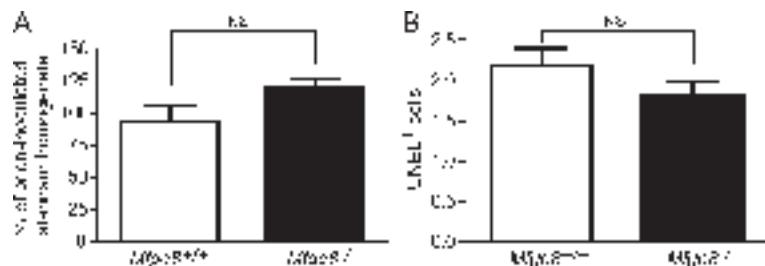


Figure S3. Quantitation of PrP^{Sc} levels and apoptotic granule cells in B6-*Mfge8*^{-/-} mice. (A) MPA of brain homogenates from i.c. inoculated B6-*Mfge8*^{+/+} and B6-*Mfge8*^{-/-} mice showed similar levels of protein aggregates at terminal disease stage ($n = 6$). Error bars represent SD. (B) Quantitation of TUNEL⁺ cerebellar granule cells of i.c. inoculated B6-*Mfge8*^{+/+} and B6-*Mfge8*^{-/-} mice at terminal disease stage. Graph shows quantitation of TUNEL⁺ cells from at least three cerebellar areas per mouse ($n = 3$). Number of TUNEL⁺ cells was normalized against the number of DAPI⁺ nuclei. Graph shows percentage of TUNEL⁺ cells per area \pm SD. No significant difference was found between B6-*Mfge8*^{+/+} and B6-*Mfge8*^{-/-} mice. One out of six independent experiments is shown.

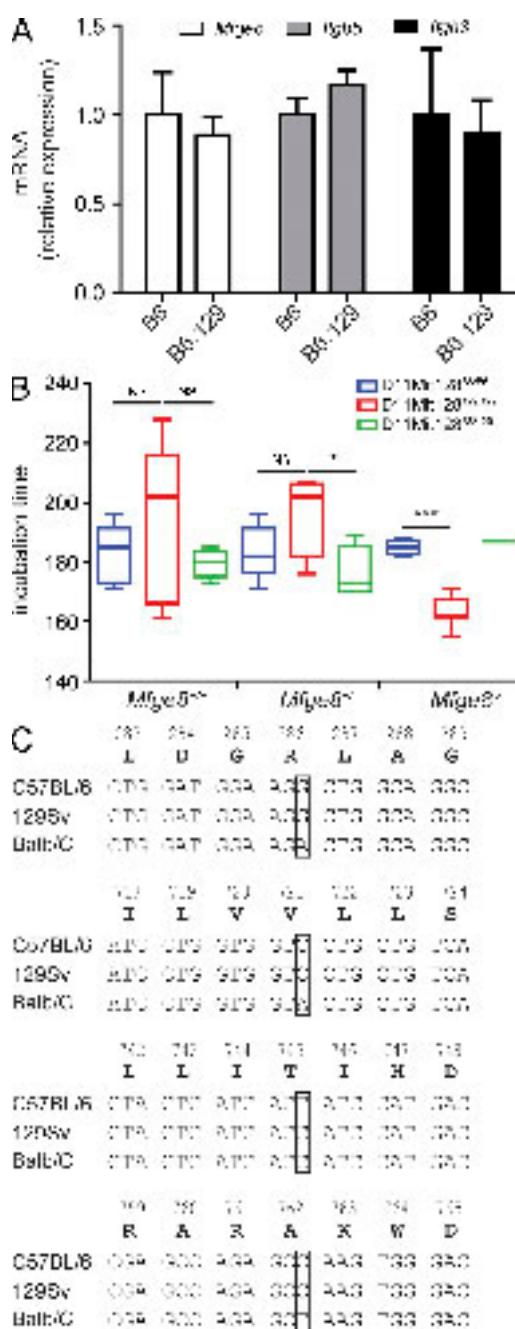


Figure S4. Possible contribution of integrins to strain-dependent effects. (A) Quantitative RT-PCR for *Mfge8*, *Itgb3*, and *Itgb5* on cDNA from B6 and B6.129 brains ($n = 3-5$). One out of three independent experiments is shown. (B) Analysis of the incubation time (in days) in *Mfge8^{+/+}*, *Mfge8^{+/-}*, and *Mfge8^{-/-}* mice in dependence of their microsatellite D11Mit128 allelotype (B6/B6, B6/129, 129/129; *, $P = 0.0329$; ***, $P < 0.0001$; Student's *t* test). (A and B) Error bars represent SD. (C) Sequence of *Itgb3* open reading frame in B6, 129Sv, and Balb/C. Numbers indicate amino acid position. Strain-dependent nucleotide polymorphisms are indicated by boxes.

Table S1, included as a separate PDF file, shows an overview of primers used for STR analysis.