## **Supplementary Material**

**Figure SP1.** Immunofluorescence images of Tie2 expression in transverse sections through the anterior horn of the lumbar SC in (A - I) normal and NMO rats treated with (C, G) C16, (D, H) Tie2 KI + C16 and (E, I) LY294002 + C16 at 3 and 8 weeks P.I. Scale bar = 100  $\mu$ m. (J) Plot of Tie2+ blood vessels. a, *P* < 0.05 versus normal group; b, *P* < 0.05 versus the vehicle-treated group; c, *P* < 0.05 versus the C16-treated group; d, *P* < 0.05 versus Tie2 KI + C16 group. Tie2 loss in the ON of vehicle-treated NMO rats is indicated by the arrow in B, F.

**Figure SP2.** Immunofluorescence images of Akt expression in transverse sections through the anterior horn of the lumbar SC in (A) normal and NMO rats treated with (C, G) C16, (D, H) Tie2 KI + C16 and (E, I) LY294002 + C16 at 3 and 8 weeks P.I. Scale bar = 100  $\mu$ m. (J) Plot of Akt+ neurons in the anterior horn of SC. a, *P* < 0.05 versus normal group; b, *P* < 0.05 versus the vehicle-treated group; c, *P* < 0.05 versus the C16-treated group; d, *P* < 0.05 versus Tie2 KI + C16 group. Akt loss in the ON of vehicle-treated NMO rats is indicated by the arrow in B, F.

**Figure SP3.** Immunofluorescence images of (A - J, green)  $\alpha\nu\beta3$  and (K - T, red)  $\alpha5\beta1$  integrin expression in transverse sections through the anterior horn of the lumbar SC in normal and NMO rats at 3 and 8 weeks P.I. Treating NMO rats with C16, Tie2 KI + C16, or LY294002 + C16, rescued  $\alpha\nu\beta3$  and  $\alpha5\beta1$  integrin expression. Scale bar = 100 µm. (U) Plot of  $\alpha\nu\beta3$ + neurons in the anterior horn of the SC. (V) Plot of  $\alpha 5\beta 1$ + neurons in the anterior horn of the SC. a, P < 0.05 versus normal group; b, P < 0.05 versus the vehicle-treated group; c, P < 0.05 versus the C16-treated group; d, P < 0.05 versus Tie2 KI + C16 group.

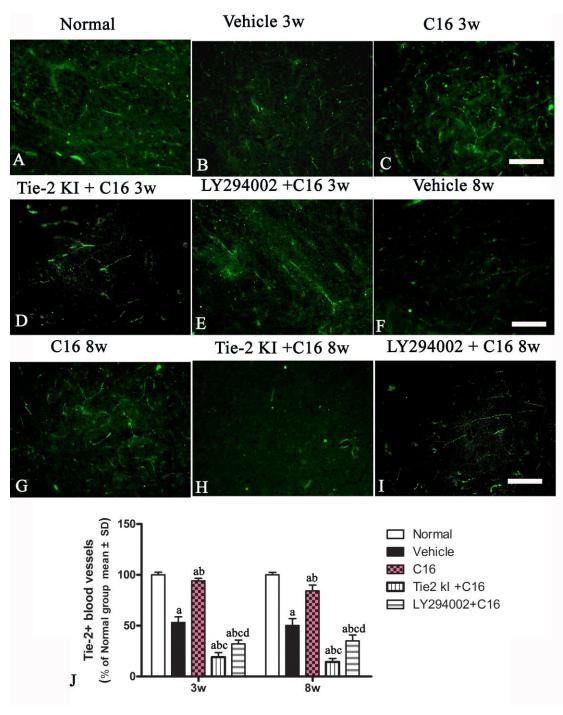
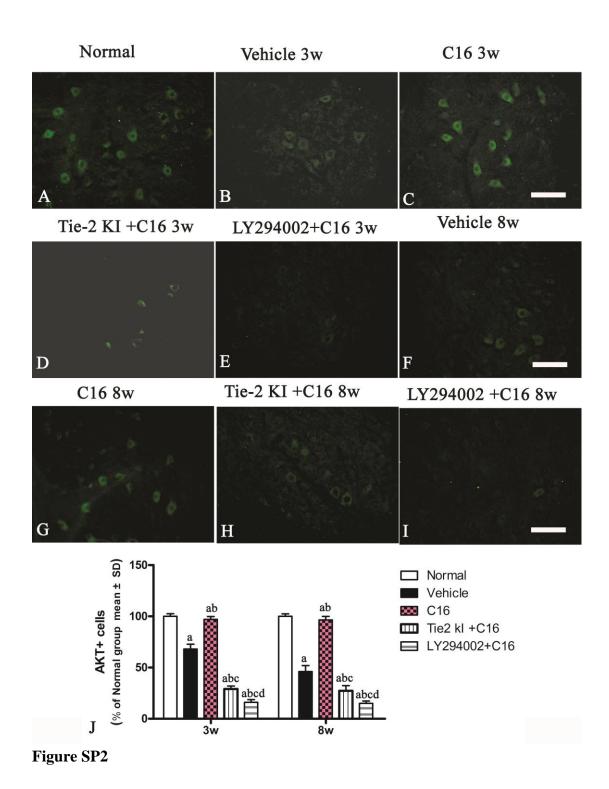
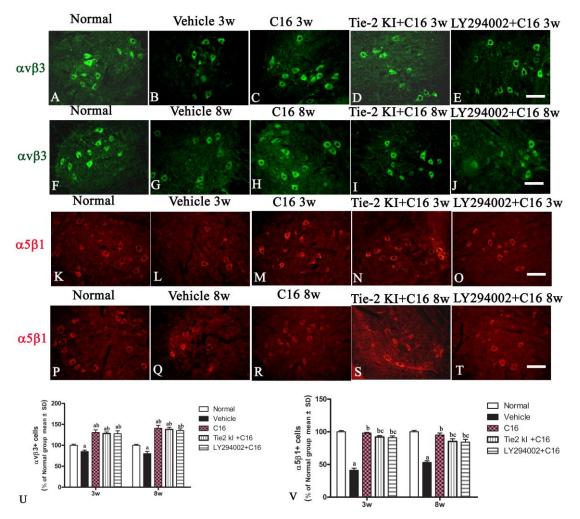


Figure SP1





**Figure SP3**