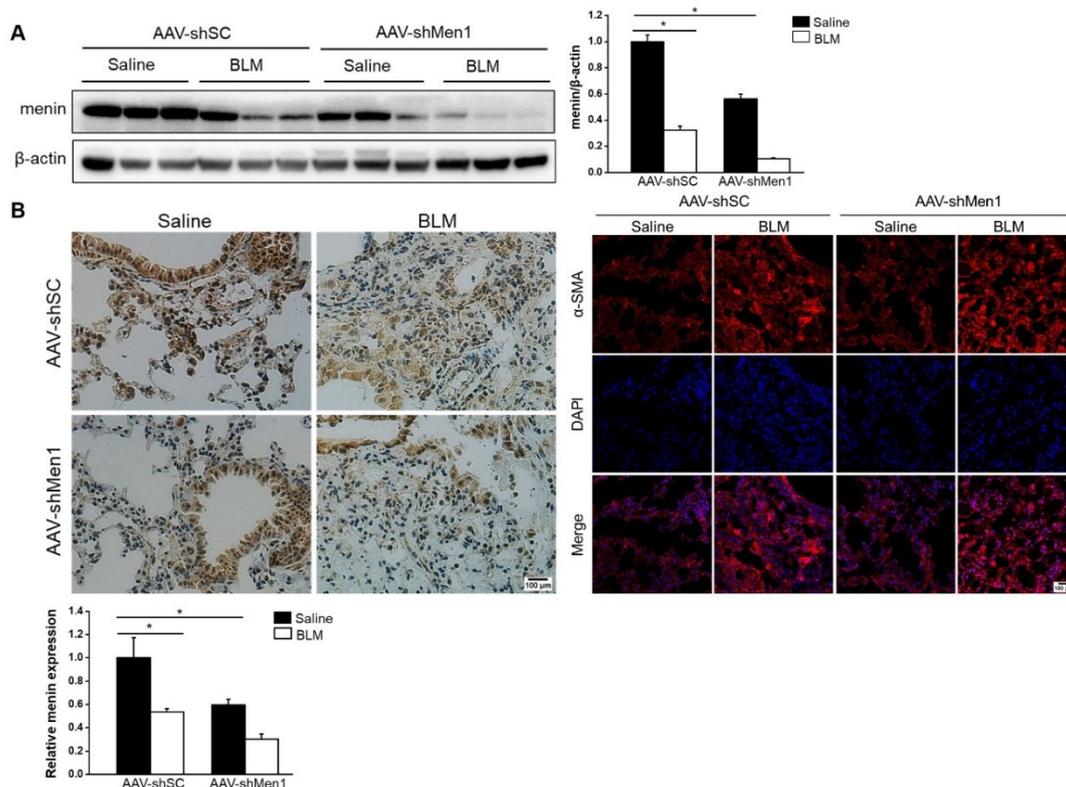
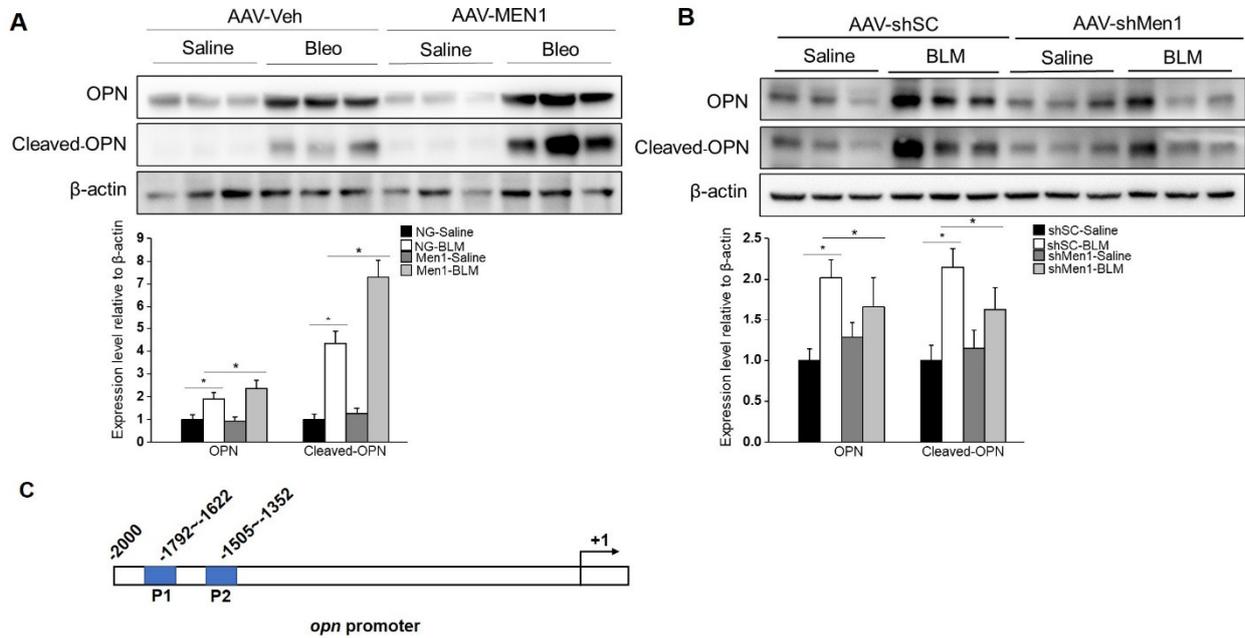


**Figure S1.** Menin was overexpressed upon AAV-Men1 infection. (A) The protein level of menin in lung tissues was determined by Western blotting and the data were quantified by Image J software ( $n = 7$  for each group). (B) The expression and distribution of menin were virtualized by IHC staining and the data were quantified by Image J software ( $n = 7$  for each group). Scale bar: 100  $\mu\text{m}$ . \*,  $P < 0.05$ .



**Figure S2.** The expression of menin was inhibited by AAV-shMen1 infection. (A) The protein level of menin in lung tissues was detected by Western blotting. Data quantification was performed by

Image J software ( $n = 6$  for each group). (B) Expression and distribution of menin were determined by IHC staining and data quantification was performed by Image J software ( $n = 5$  for each group). \*,  $P < 0.05$ . (C) The expression of  $\alpha$ -SMA in lung tissue was visualized with IF staining.  $\alpha$ -SMA and the nuclei were labeled with Cy5 and DAPI, respectively. Scale bar: 100  $\mu$ m.



**Figure S3.** Menin regulates OPN expression by transcriptional way. (A-B) The level of OPN protein in lung tissue was determined by Western blotting. ( $n = 7$  for AAV-NG and AAV-Men1 groups,  $n = 6$  for AAV-shSC and AAV-shMen1 groups). (C) The specific primers to the OPN promoter region were designed.