

Figure S1. The precise information of the evaluation criteria for the construction of the BPD model. (A) Radial alveolar counts (RACs), an important index to evaluate the stage of lung development, were significantly lower in the model compared with the control group starting 7 days following hyperoxic exposure. (B) In a comparison of alveolar wall thickness, this was significantly increased in the model group starting 7 days following hyperoxic exposure. Data are expressed as the means \pm SD (n=6). *P<0.05, **P<0.01, ***P<0.001. BPD, bronchopulmonary dysplasia.

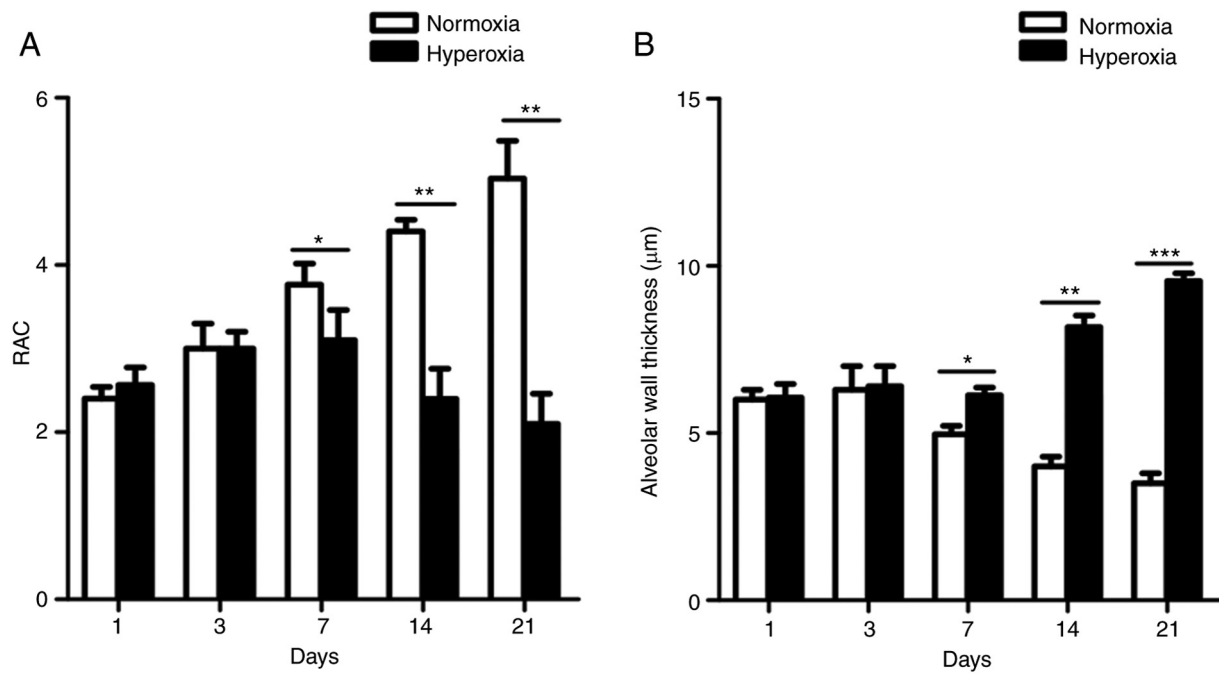


Figure S2. YAP, β -catenin, SPC and AQP5 IF staining. Expression of (A) SPC and YAP, (B) AQP5 and YAP, (C) SPC and β -catenin, and (D) AQP5 and β -catenin detected by double IF staining. SPC, surfactant protein C; AQP5, aquaporin 5.

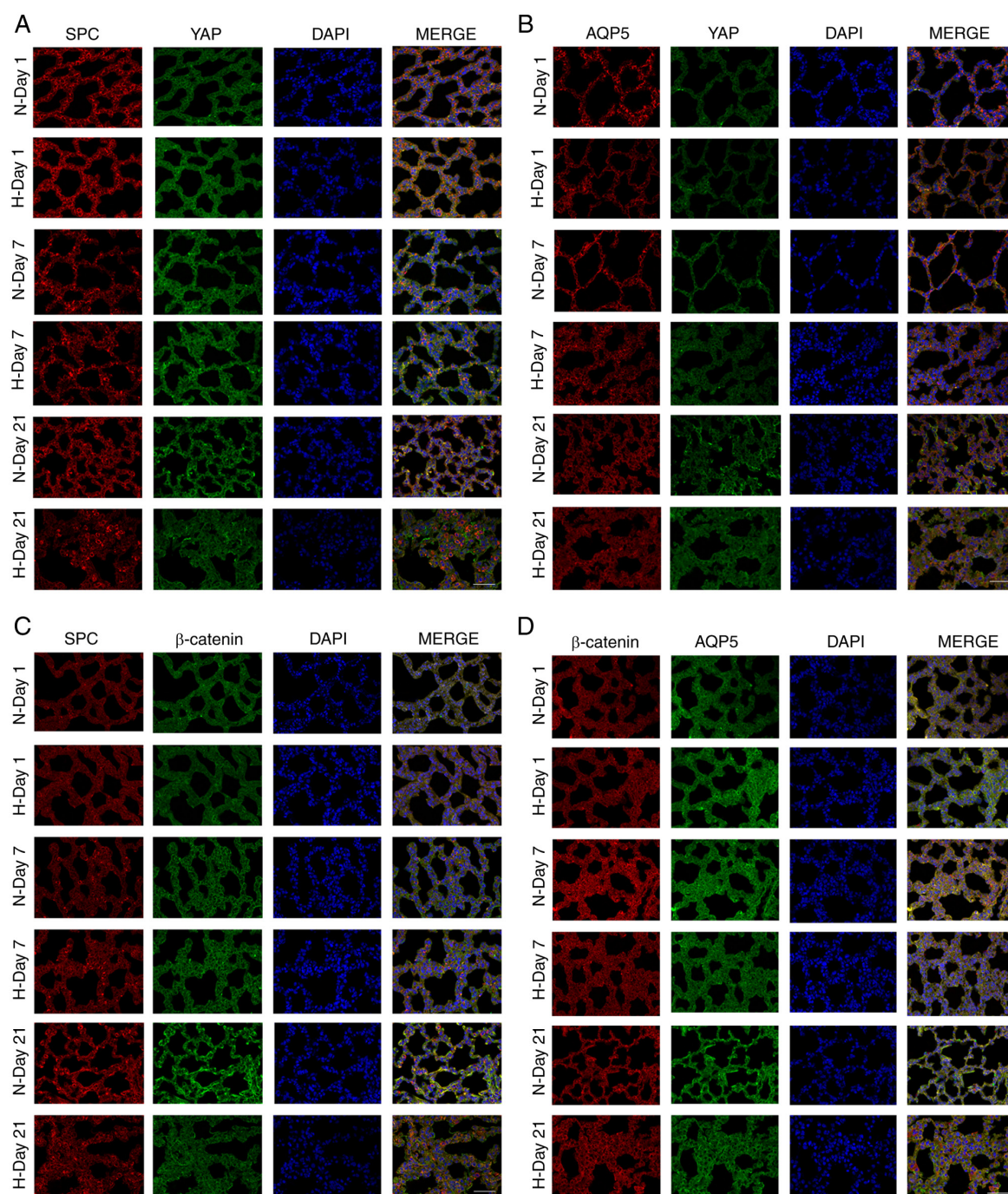


Figure S3. YAP, SPC and AQP5 IF staining in AECIIs and AECIs. (A) SPC is expressed solely by AECIIs and is an AECII marker. SPC IF expression in primary cultured AECIIs. (B-D) YAP (B and D) overexpression and (C and D) knockdown efficiency in AECIIs. * $P < 0.05$, ** $P < 0.01$. (E and F) Double IF staining for (E) SPC and YAP or (F) AQP5 and YAP in OEYAP, KDYAP and corresponding control (OENC, KDNC) AECIIs extracted from rats exposed to hyperoxia for 7 days. Scale bar, 40 μm . N, normoxia-exposed rats; H, hyperoxia-exposed rats; AECIIs and AECIs, alveolar epithelial type II and I cells; OE, overexpression; NC, negative control; KD, knockdown; SPC, surfactant protein C; AQP5, aquaporin 5.

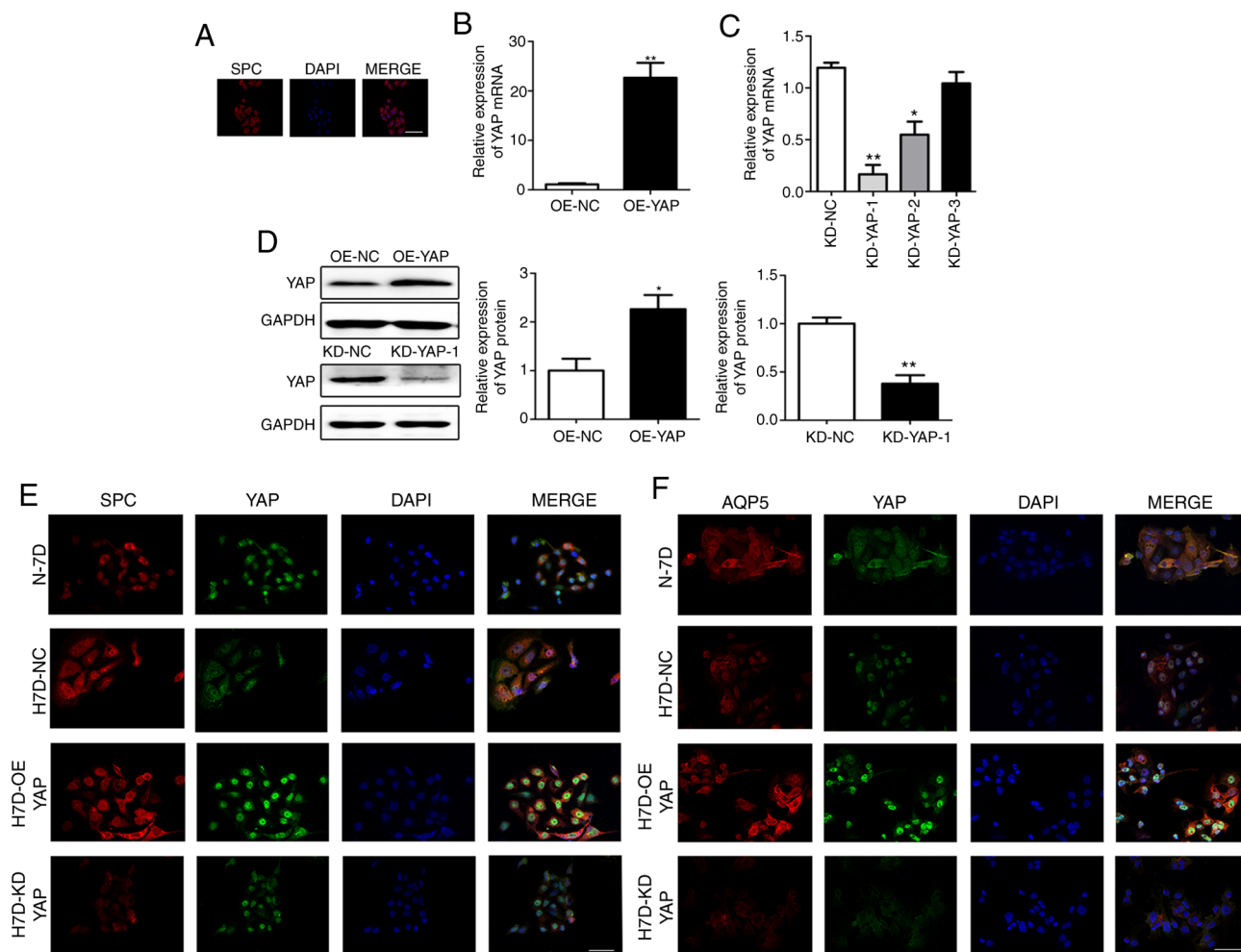


Figure S4. YAP, β -catenin, SPC and AQP5 IF staining in AECIIs and AECIs. (A-C) Wnt3a (A) overexpression and (B and C) knockdown efficiency in AECIIs. (D and E) Double IF staining for (D) SPC and β -catenin or (E) AQP5 and β -catenin in OEYAP, KDWnt3a, OEYAP + KDWnt3a and corresponding control (OENC, KDNC) AECIIs extracted from rats exposed to hyperoxia for 7 days. Data are expressed as the means \pm SD (n=3). *P<0.05, **P<0.01. Scale bar, 40 μ m. (F and G) Double IF staining for (F) SPC and β -catenin or (G) AQP5 and β -catenin in KDYAP, OEWnt3a, KDYAP + OEWnt3a, and corresponding control (OENC, KDNC) AECIIs extracted from rats exposed to hyperoxia for 7 days. Scale bar, 40 μ m. N, normoxia-exposed rats; H, hyperoxia-exposed rats; NC, negative control; KD, knockdown; SPC, surfactant protein C; AQP5, aquaporin 5.

