



Supplementary information, Figure S5 *Apln* expression map by *Apln^{LacZ/+}* line. **(A)** Wholemount X-gal staining of E12.0 *Tie2-Cre;Rosa26^{LacZ/+}* embryo. Endocardium was positive for x-gal staining in the heart (h). **(B-C)** Wholemount and sectional X-gal staining of E11.5 *Apln^{LacZ/+}* embryo shows vessel patterning of *Apln* expression. Endocardium was negative for x-gal staining in the heart (h), while blue arrows indicate *Apln⁺* endothelial cells. A, atrium; V, ventricle. **(D)** *Apln* is expressed in a subset of endothelial cells in pharyngeal arch (black arrow). **(E-H)** E12.5, E13.5, E14.5 and E15.5 *Apln^{LacZ/+}* hearts stained with X-gal showed vessel patterning of *Apln⁺* cells, and also no *Apln⁺* coronary vessels in part of region on ventral side (*). White bar = 1 mm; black bar = 0.5 mm. PA, pharyngeal arch; A, atrium; V, ventricle.