

## Supplemental Data Figure Legends

**Figure S1.** The *tsc1b* morphant develops body curvature but no pronephric cysts. B illustrates the body curvature phenotype in *tsc1b* knockdown embryos compared to wild type (A). C. Arrow points to the glomerular and tubular region pronephric tubule region and the absence of cysts in the embryo shown in B. WT: wild type; *tsc1b*: *tsc1b* morphant.

**Movie S1.** A bundle of cilia beating in the anterior of a kidney duct from a wild type, 3 dpf embryo. The movie was captured at 200 frames/second and plays at 10 frames/second.

**Movie S2.** Cilia in the anterior portion of a 3 dpf *tsc1a* morphant kidney duct beat at a rate similar to wild type embryos. The movie was captured at 200 frames/second and plays at 10 frames/second.

Figure S1.

