

**Figure S1.** Validation of the probes against *Sumo1, Sumo2,* and *Sumo3* used in whole-mount in situ hybridization analysis (Fig. 1). Hybridization analysis was performed under the same conditions for control and mutant embryos. In each null mutant E8.5 embryo, the respective *Sumo* mRNA was not detected using the specific probe, demonstrating high specificity of all probes. Scale bar: 100 µm.