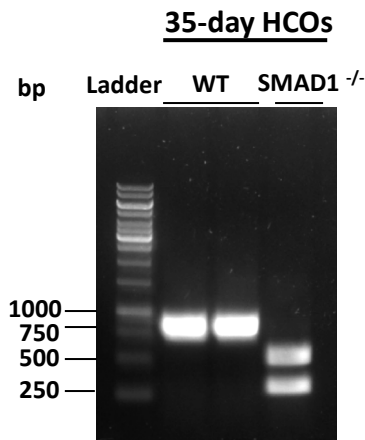


## Supplementary Figure S1. Validation of SMAD1<sup>-/-</sup> HCOs.



Supplementary Figure S1. PCR genotyping of 35-day old HCOs. PCR primers were designed flanking the EcoRI site that was introduced into the SMAD1<sup>-/-</sup> cells. PCR was then performed on DNA from 35-day old organoids and then subjected to EcoRI digest. The WT band should be 887bp. The SMAD1<sup>-/-</sup> should be cut into 2 bands of 567 and 320bp. Each lane is representative of 5 organoids pooled from 1 differentiation. The first lane was loaded with Thermo Scientific™ GeneRuler™ DNA 1kb Ladders.