

Colonic crypts isolated from Atoh1<sup>GFP/GFP</sup> mice 1.

2. Colonic Atoh1+ cells sorted from Atoh1<sup>GFP/GFP</sup> mice

Colonic Atoh1- cells sorted from Atoh1<sup>GFP/GFP</sup> mice lleal crypts isolated from Atoh1<sup>GFP/GFP</sup> mice 3.

4.

Ileal Atoh1+ cells sorted from Atoh1<sup>GFP/GFP</sup> mice 5.

6.

Ileal Atoh1- cells sorted from Atoh1<sup>GFP/GFP</sup> mice Ileal GFP+ cells sorted from Fabp1<sup>Cre</sup>; Atoh1<sup>lox/lox</sup>; Rosa26<sup>rtta-ires-EGFP</sup> mice 7.

(mice were given 2mg/ml tetracycline in water for 5 consecutive days) 8. Ileal GFP+ cells sorted from Fabp1<sup>Cre</sup>; Atoh1<sup>lox/lox</sup>; Rosa26<sup>rtta-ires-EGFP</sup>; TRE-Spdef mice (mice were given 2mg/ml tetracycline in water for 5 consecutive days)

9. Ileal GFP+ cells sorted from Lgr5<sup>CreERT2</sup>; β-catenin<sup>exon3</sup>; Rosa26<sup>rtta-ires-EGFP</sup>; TRE-Spdef mice

(mice were given an intraperitoneal injection of 1 mg/mouse tamoxifen and then 2mg/mltetracycline in water for 5 consecutive days)