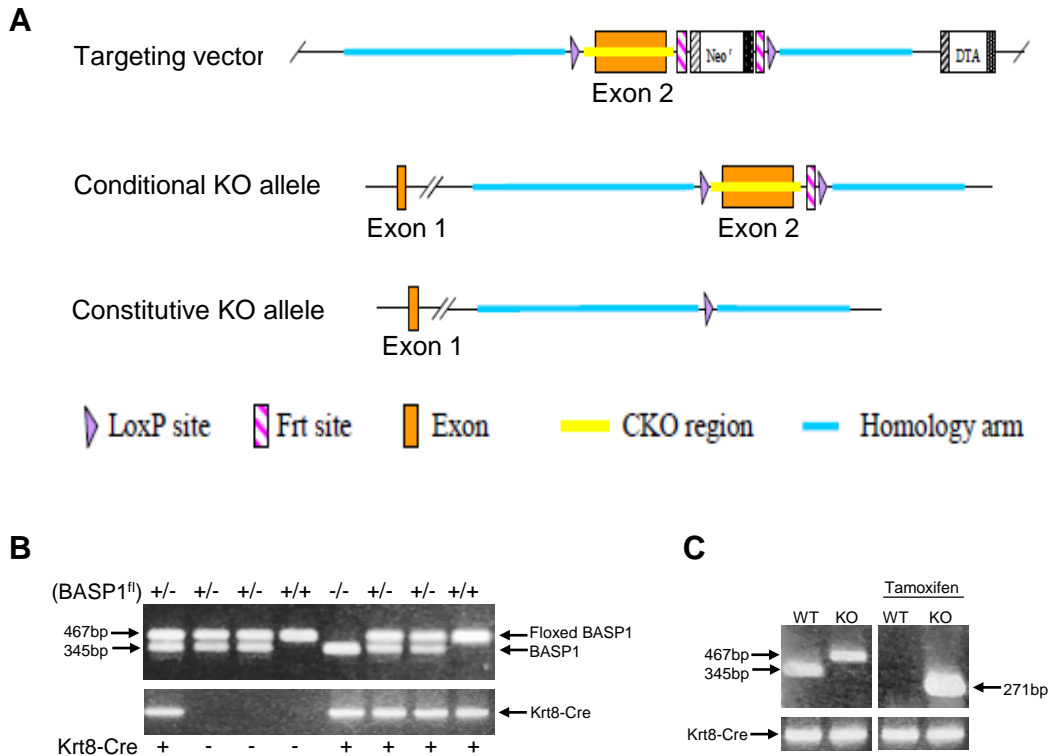


Supplementary Figure 1



Supplementary Figure. 1. Strategy for producing a floxed BASP1 mouse.

The mouse *Basp1* gene (GenBank accession number: NM_027395.2, Ensembl: ENSMUSG00000045763) is located on mouse chromosome 15 and contains two exons.

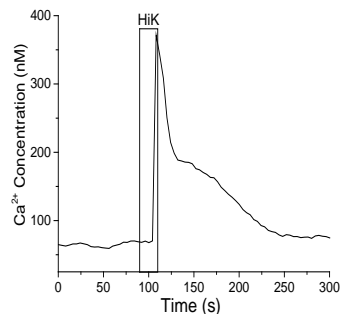
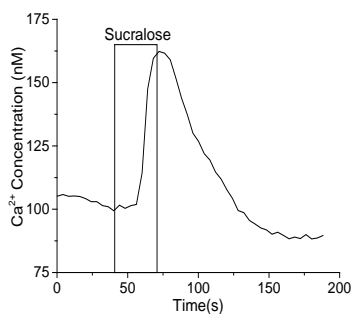
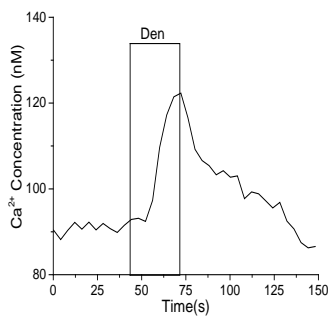
(A) Since all of the coding region for BASP1 is located solely in exon 2, it was targeted as the conditional knock out region. Deletion of exon 2 results in the total loss of *Basp1* protein. To engineer the targeting vector, homology arms and CKO region were generated by PCR using BAC clone RP23-209B5 or RP23-334N16 from the C57BL/6 library as template. In the targeting vector, the Neo cassette was flanked by Frt sites, and CKO region was flanked by LoxP sites. DTA was used for negative selection. The conditional KO allele was obtained after Flp-mediated recombination and the constitutive KO allele was generated after Cre-mediated recombination. C57BL/6 ES cells were used for gene targeting.

(B) Genotype analyses for BASP1 and Krt8-CRE genes are shown (n=8 mice). The upper gel is a compilation of homozygous floxed mice, heterozygous floxed mice and CTL (non-floxed) mice. The floxed band size is 467bp while the CTL band size is 367bp. The lower gel identifies mice containing Krt8-Cre.

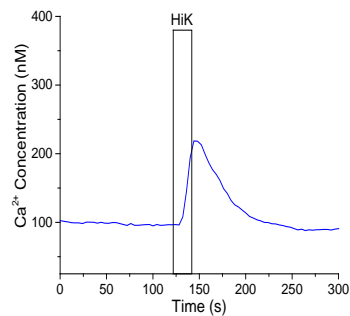
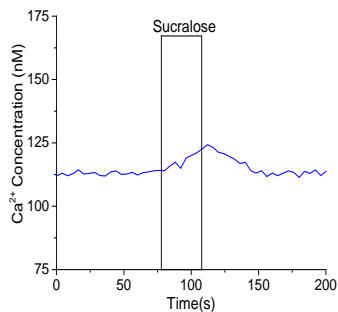
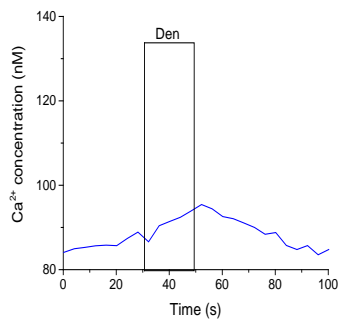
(C) Prior to tamoxifen treatment, CTL and KO mice have either the 467 bp (floxed mouse) or the 345 bp band (CTL). After tamoxifen treatment, primers specific to the resulting floxed site that has deleted BASP1 produces a 271 bp band while no band is present in the CTL.

Supplementary Figure 2

CTL

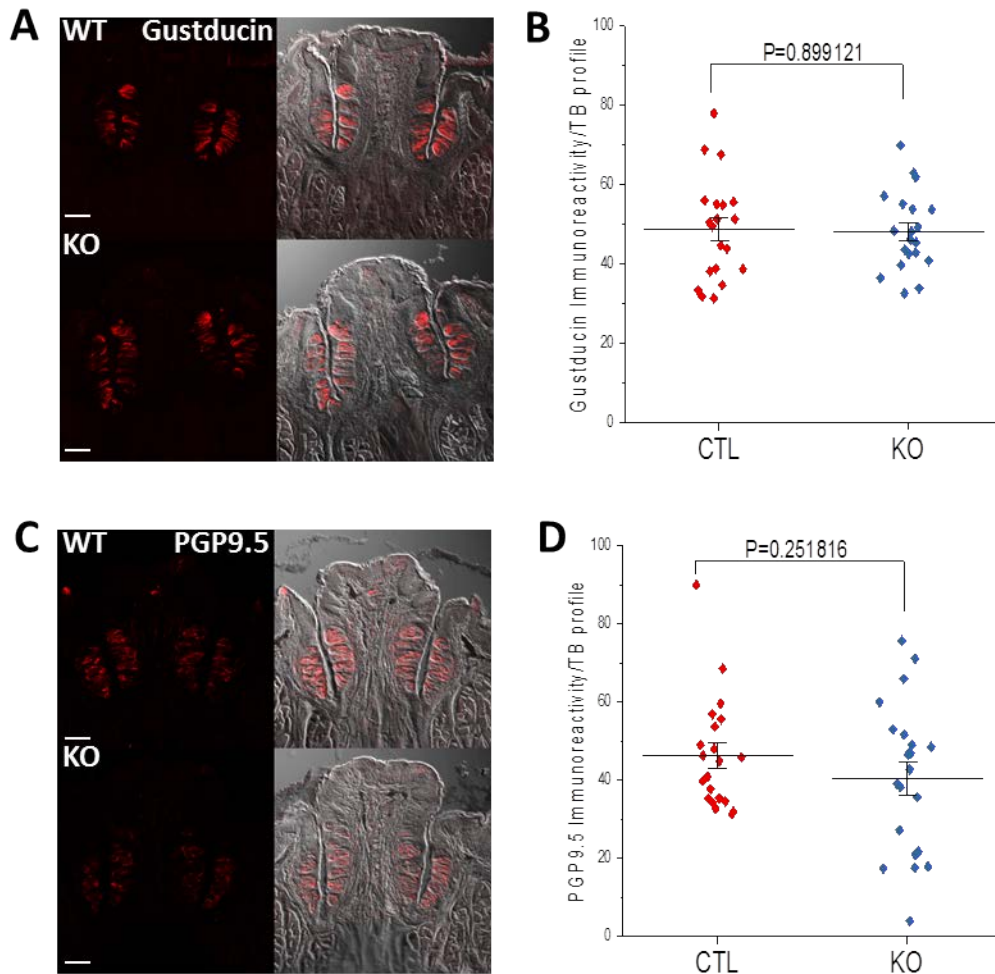


Krt8BASP1-KO



Supplementary Figure 2: Reduced taste evoked responses in CV cells in the absence of BASP1. Isolated taste cells from control mice (CTL, upper panels) or Krt8-BASP1-KO mice (lower panels) were subjected to the stimuli indicated and calcium signals was measured by Fura2AM imaging. Representative plots for each stimulus are shown.

Supplementary Figure 3



Supplementary Figure 3: **(A)** Immunohistochemistry of CV taste buds to detect gustducin (red) in control (WT) mice and Krt8-BASP1-CRE (KO) mice treated with Tamoxifen for 8 days. Scale bar=50 μ M. **(B)** A plot of gustducin signal intensity per taste bud in control (CTL) and Krt8-BASP1-CRE mice is shown. Horizontal bars represent mean intensity. **(C)** Immunohistochemistry of CV taste buds to detect PGP9.5 (red) in control (WT) mice and Krt8-BASP1-CRE (KO) mice treated with Tamoxifen for 7 days. Scale bar=50 μ M. **(D)** A plot of PGP9.5 signal intensity per taste bud in control (CTL) and Krt8-BASP1-CRE mice is shown. Horizontal bars represent mean intensity.