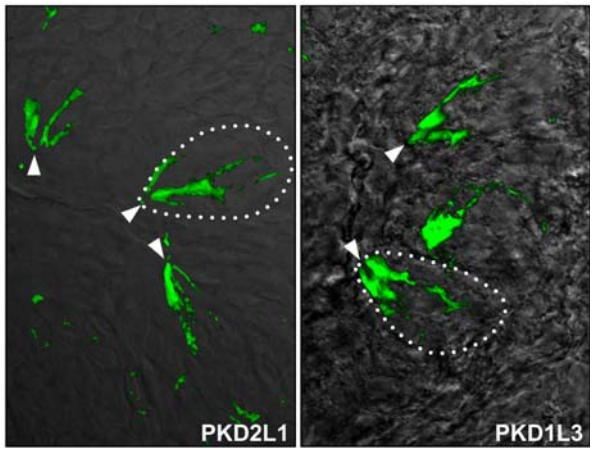
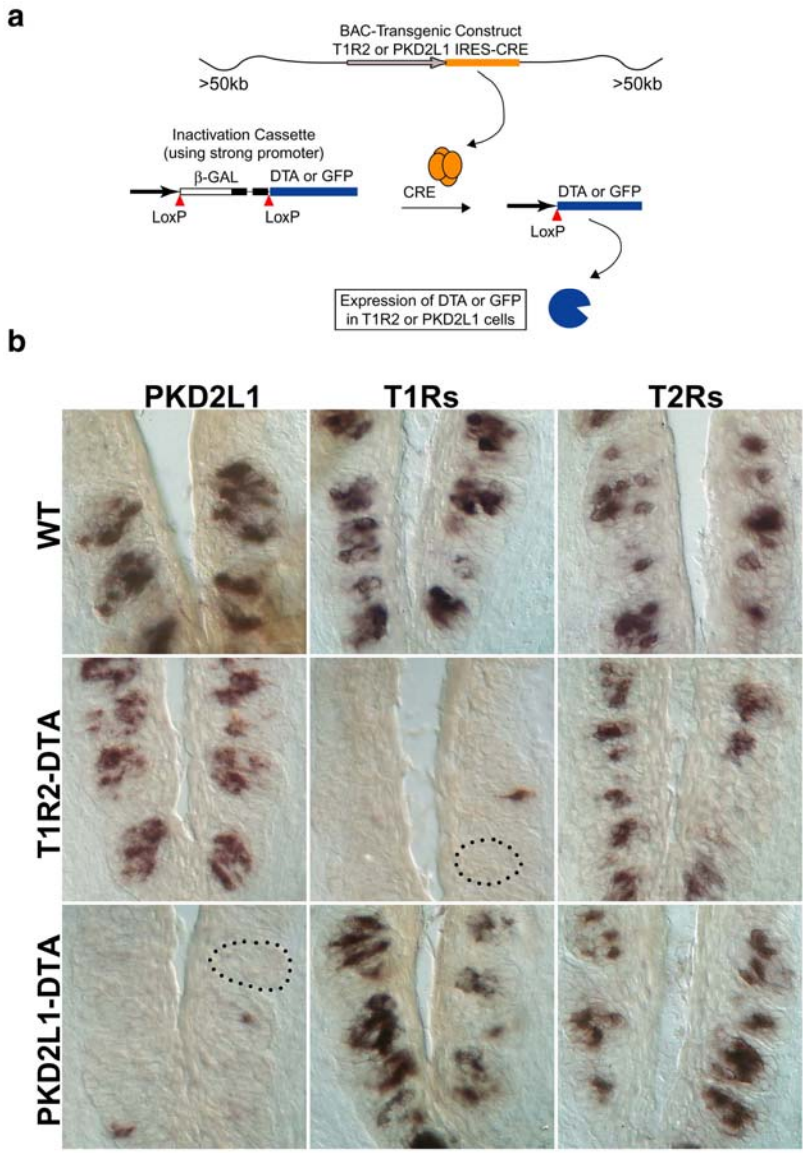


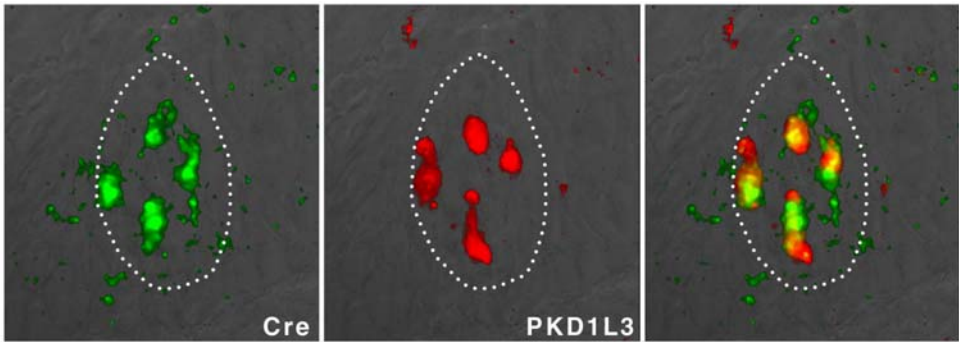
Supplementary Figure 1: PKD2L1 and PKD1L3 are enriched in the taste pore

Immunofluorescent stainings of mouse taste buds with PKD2L1 (left panel) and with PKD1L3 (right panel) antibodies. The pictures show superposition of fluorescent antibody signals on DIC images of taste tissue. Dotted lines illustrate the outline of a taste bud, and arrows point to the taste pore region.



Supplementary Figure 2: Loss of selective TRCs in DTA-expressing animals

Upper diagram (a) illustrates the strategy used to target DTA or GFP to selective populations of TRCs. BAC constructs contained the entire T1R2 or PKD2L1 genes with the IRES-Cre added downstream of the termination codon, but upstream of polyA-addition signals. In both cases, the transgenic constructs included at least 50Kb of flanking sequences upstream and downstream of the target gene (see Methods). Fidelity of Cre and reporter expression in the correct cell types was confirmed by double labeling with a variety of TRC-specific gene probes. Lower panels (b) show *in situ* hybridization experiments examining the presence of sweet (T1Rs), bitter (T2Rs) or PKD2L1-expressing cells in the two engineered lines. Targeting of DTA to T1R2- or PKD2L1-expressing cells eliminates over 95% of their respective TRC population. In situ hybridization probes were as in Figure 1.



Supplementary Figure 3: Targeting of Cre recombinase to PKD-expressing TRCs

In situ hybridization with double-labeled probes (Cre and PKD1L3) was used to examine the expression of Cre recombinase in PKD-expressing cells. Dotted lines illustrate the outline of a taste bud; note the cellular overlap in the hybridization signals. Similar results were obtained by crossing PKD2L1-Cre lines to GFP reporter lines[30].