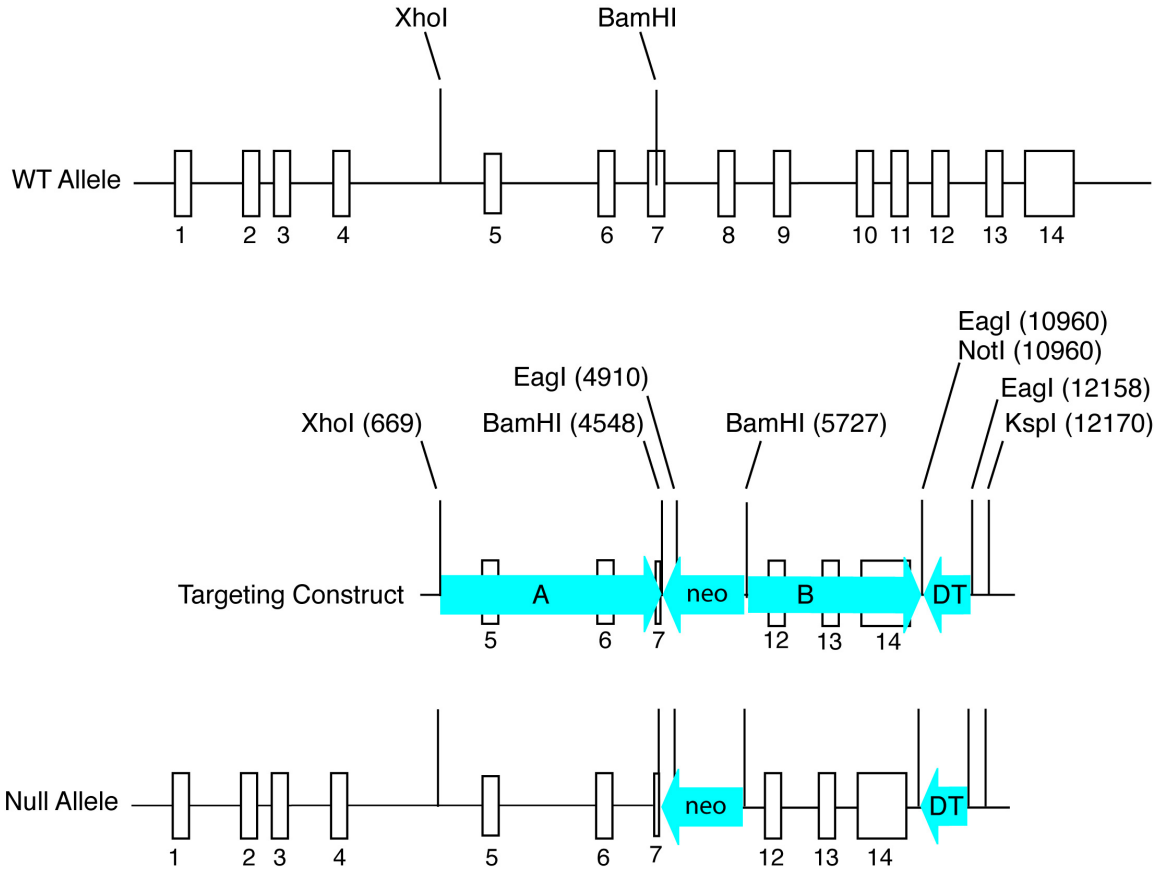
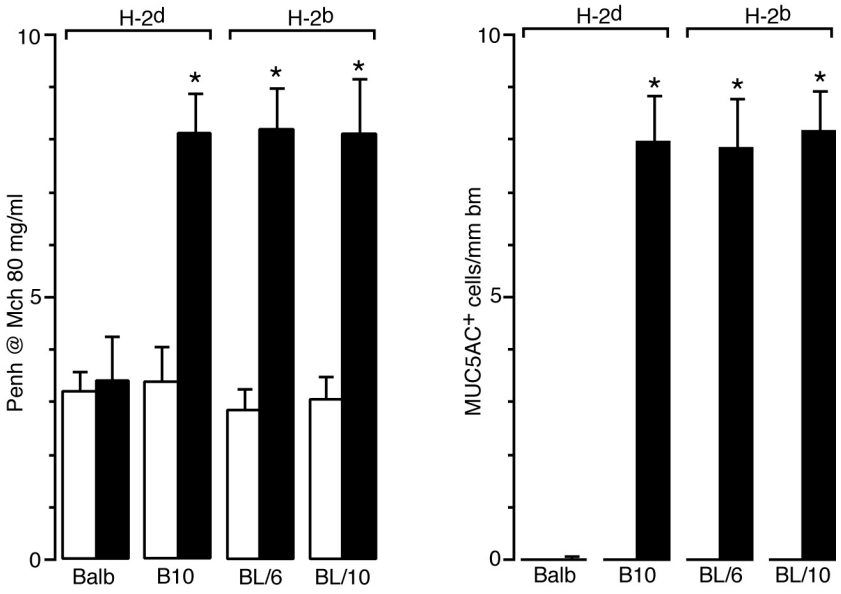
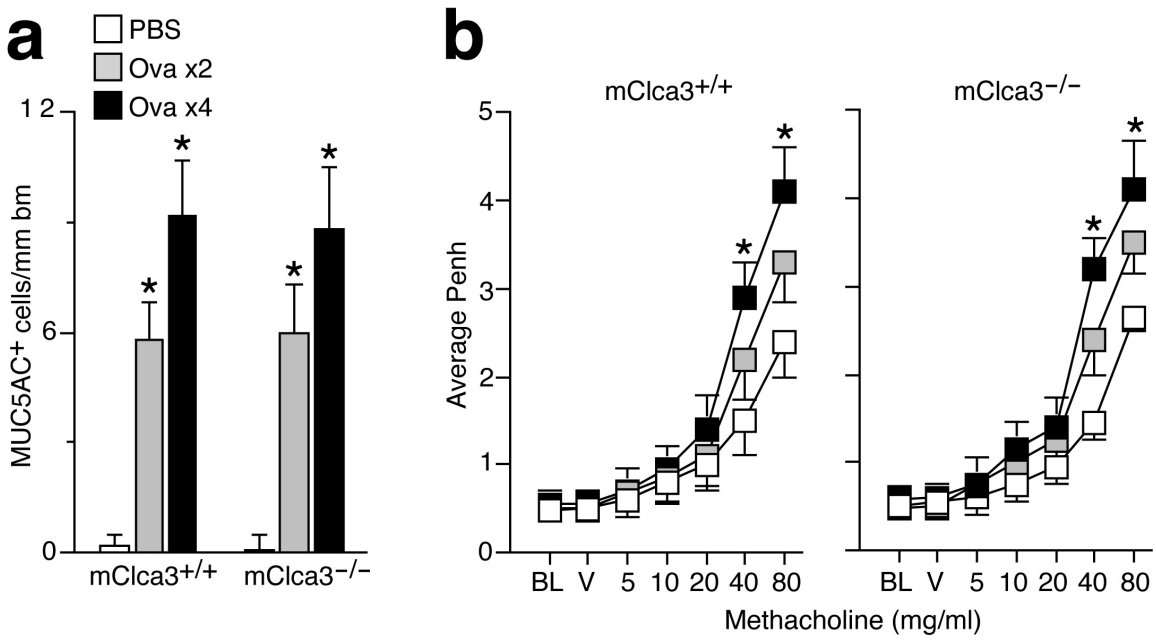
Supplementary Figures



Supplementary Fig. 1. Diagram of *mClca3* wild type (WT) allele, targeting construct, and null allele. Boxes and corresponding numbers indicate base pair locations of exons in the *mClca3* gene sequence. The targeting construct was prepared with a 5' homology region (A) of 3946 bp extending from 961 nt upstream of exon 5 to 96 nt into exon7 and a 3' homology region (B) of 5227 bp from 90 bp after the splice donor site of exon 11 to 1109 bp downstream of exon 14. The intervening region was substituted by a Neomycin (neo) resistance cassette of 1.2 kb in reverse orientation. The targeting construct also included a Diptheria toxin cassette (DT) adjacent to the 3' homology arm to permit negative selection of unspecific insertion events. This approach results in *mClca3*$^{-/-}$ mice with deletion of the 3' half of exon 7, exons 8-11, and the intervening introns.



Supplementary Fig. 2. Lack of effect of MHC restriction on virus-induced mucous cell metaplasia and airway hyperreactivity. Wild-type inbred strains (C57BL/6J, C57BL/10SnJ, and Balbc/J) and congenic mouse strains (Balb.B10 and B10.D2nSnJ) were inoculated with SeV and analyzed for airway reactivity and mucous cell metaplasia as described in Fig. 1. A significant increase from SeV control is indicated by (*).



Supplementary Fig. 3. Levels of allergen-induced mucous cell metaplasia and airway hyperreactivity in mClca3$^{-/-}$ mice. (**a**) mClca3$^{-/-}$ and wild-type control mice were sensitized to Ova, then challenged with intranasal PBS or Ova either twice on Day 0 (Ova x2) or twice on Day 0 and again on Days 1 and 2 (Ova x4), and analyzed for mucous cell metaplasia as described in Fig. 1. (**b**) Using conditions from (a), mClca3$^{-/-}$ and control mice were subjected to airway reactivity measurements as described in Fig. 1. Values represent mean ± SEM for 8 mice. For (a) and (b), significant differences from PBS challenge are indicated by (*).