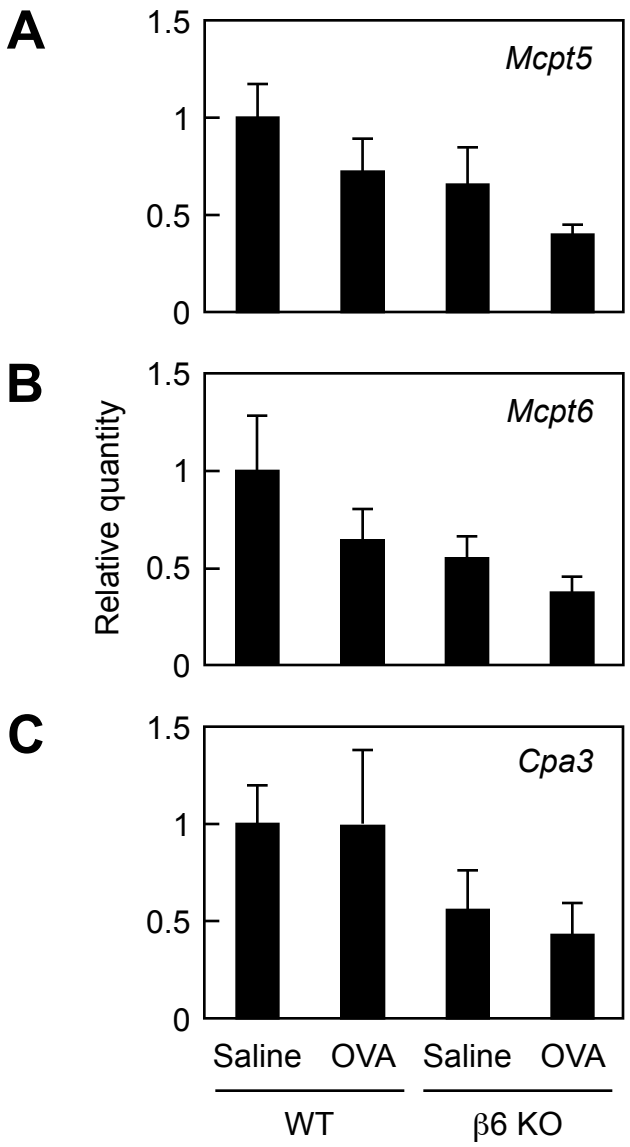
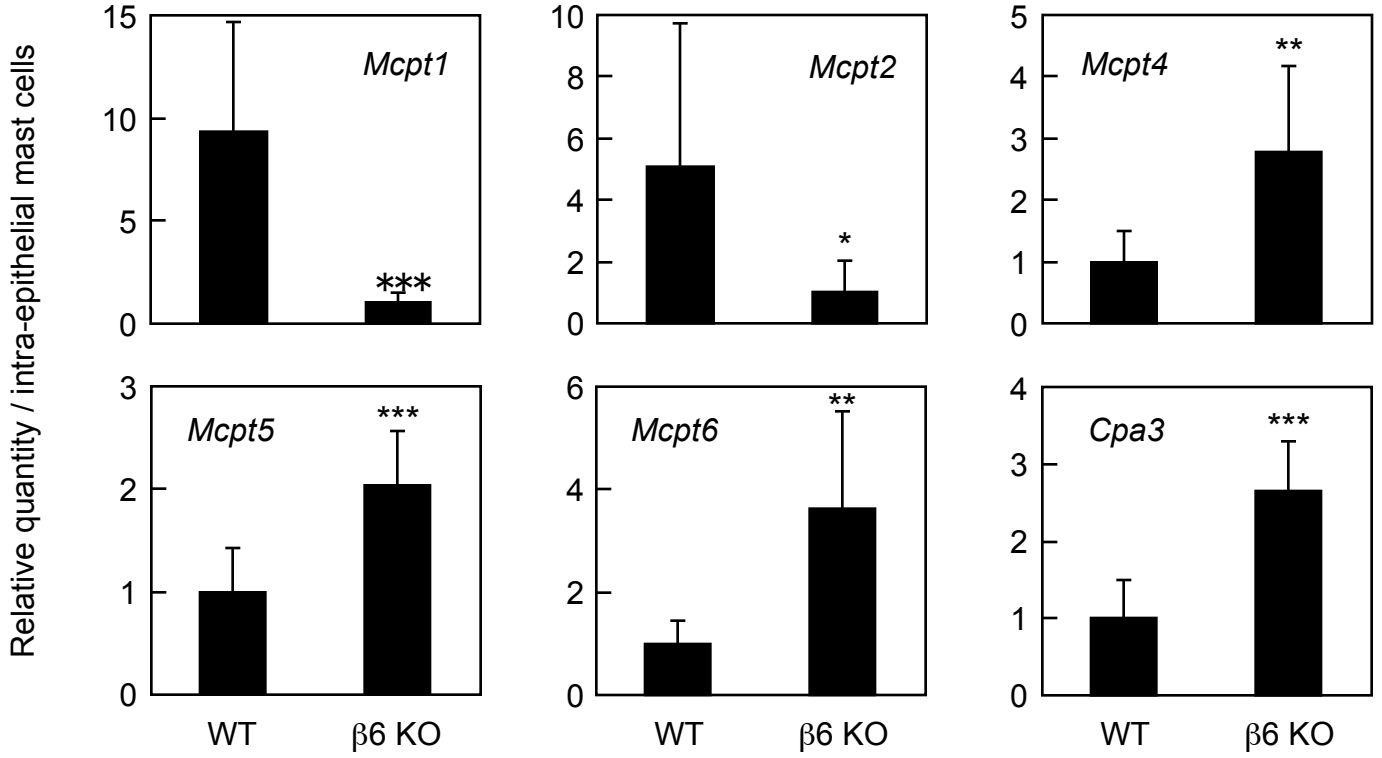
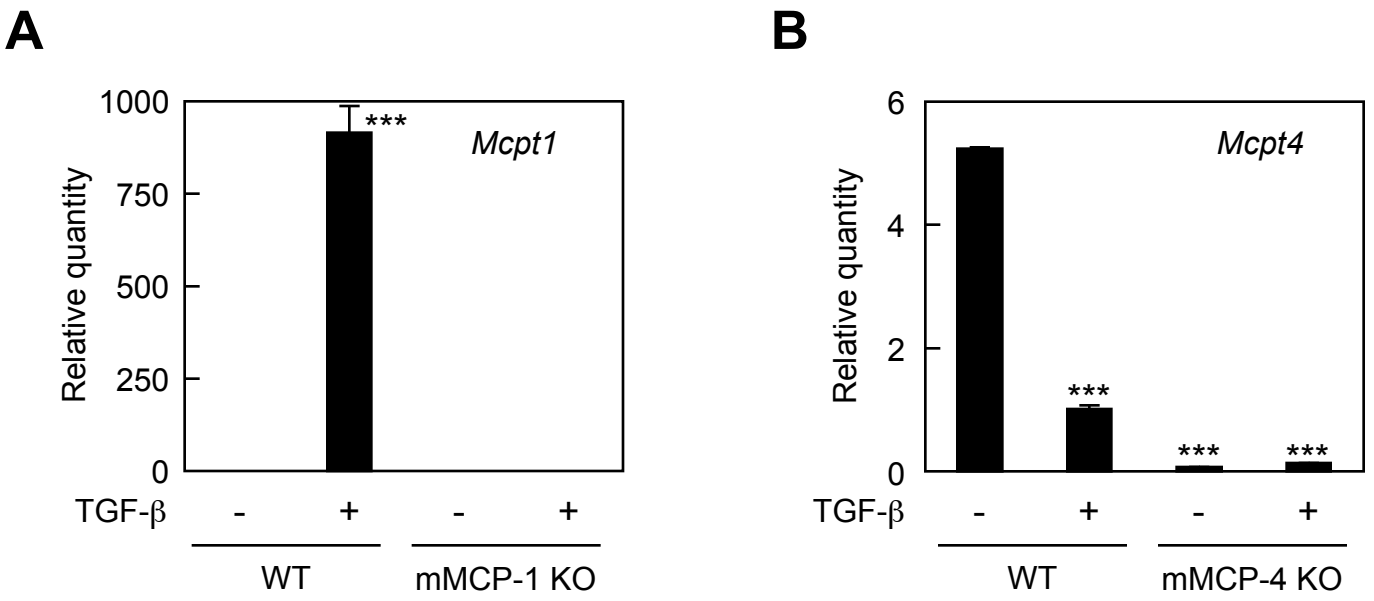


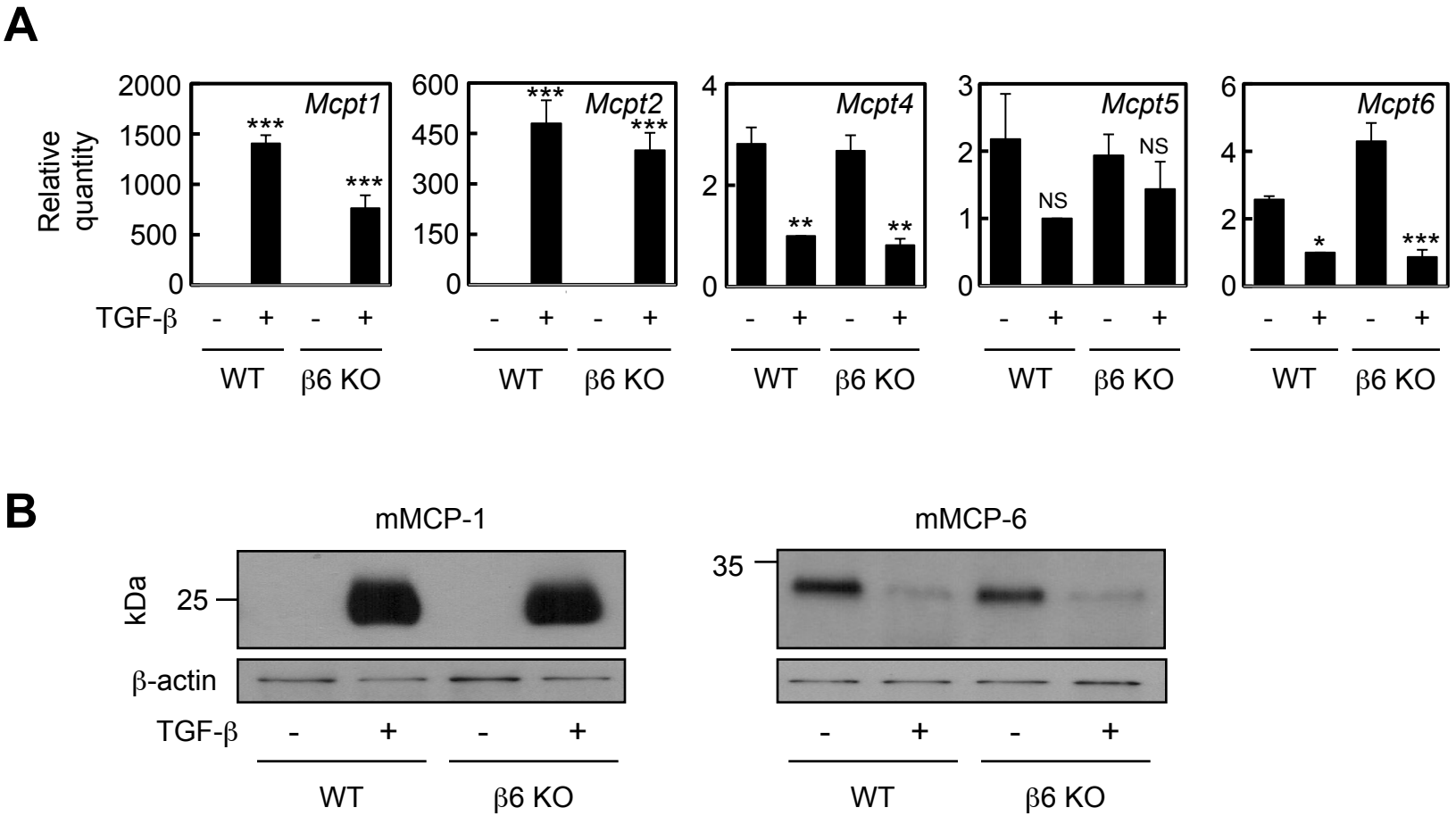
Supplementary Figure 1 Expression profiles of mast cell protease transcripts in whole lung from chronically OVA challenged WT or β6 KO mice. Total RNA isolated from whole lung from WT or β6 KO mice was analyzed for (A) *Mcpt5*, (B) *Mcpt6* and (C) *Cpa3* expression by qRT-PCR. Values for each mRNA were normalized to GAPDH and relative quantity was calculated relative to expression in saline treated WT mice. Data are mean ± SEM for 3 independent samples.



Supplementary Figure 2 Expression profiles of mast cell protease transcripts in brushing samples from untreated wt and β6 KO mice after normalization to number of intra-epithelial mast cells. Values for each mRNA were normalized to GAPDH. The relative quantity for *Mcpt1 and 2* was calculated relative to expression in β6 KO samples and for *Mcpt4, 5, 6 and Cpa3* was calculated relative to expression in WT samples. Data are mean ± SEM for 8 independent samples. **P* <0.05, ***P* <0.01, ****P* <0.001 compared with untreated WT mice



Supplementary Figure 3 mMCP-1 KO and mMCP-4 KO mice have complete deletion of mMCP-1 and mMCP-4 expression in BMCMCs. *In vitro* differentiated BMCMCs from (A) mMCP-1 KO mice or (B) mMCP-4 KO mice were analyzed for *Mcpt1* and *Mcpt4* expression by qRT-PCR. Values for each mRNA were normalized to GAPDH. The relative quantity for *Mcpt1* was calculated relative to expression in TGF-β (-) samples and for *Mcpt4* was calculated relative to expression in TGF-β (+) samples. Data are mean ± SEM for 3 independent samples. ****P* <0.001 compared with WT TGF-β(-).



Supplementary Figure 4 BMCMCs from WT and β6 KO mice respond similarly to stimulation with TGF-β. (A) Expression profiles of mast cell protease transcripts by qRT-PCR from WT and β6 KO mice differentiated in the presence or absence of TGF-β for 3 weeks. mRNA concentrations were normalized to GAPDH. The relative quantity for *Mcpt1 and 2* was calculated relative to expression in WT TGF-β (-) samples and for *Mcpt4, 5 and 6* was calculated relative to expression in WT TGF-β (+) samples. Data are mean ± SEM for 3 independent samples. **P* <0.05, ***P* <0.01, ****P* <0.001 compared with TGF-β untreated samples. (B) Western blot analysis of mast cell proteases in 2 μg of protein from cell lysates of cultured BMCMCs from WT and β6 KO mice differentiated in the presence or absence of TGF-β. β-actin was used as a control for equal protein loading.

Supplementary Table 1 Genes most increased at baseline in β6 knockout epithelium

Agilent probe ID	Symbol	Description	Fold increase*
A_51_P514035	*Cma1* (*Mcpt5*)	Mast cell chymase 1 (Mast cell protease 5)	14.3
A_51_P514029	*Cma1* (*Mcpt5*)	Mast cell chymase 1 (Mast cell protease 5)	13.1
A_51_P145130	*Mcpt4*	Mast cell protease 4	13.0
A_51_P214127	*Cpa3*	Carboxypeptidase A3, mast cell	12.6
A_52_P254155	*Mcpt6* (*Tpsb2*)	Mast cell protease 6	11.0
A_51_P145132	*Mcpt4*	Mast cell protease 4	8.6
A_52_P8459	*Tpsab1* (*Mcpt7*)	Tryptase α/β1 (Mast cell protease 7)	8.2
A_52_P484194	*Il1rl1*	Interleukin 1 receptor-like 1 (Interleukin 33 receptor)	7.2
A_51_P258721	*Tpsg1*	Tryptase γ1	6.3
A_51_P429770	*Fcer1a*	Fc receptor, IgE, high affinity I, α polypeptide	5.3

* Values represent fold increase with significant (adjusted $P < 0.01$) changes in epithelium of β6 KO mice compared to WT mice.

Supplementary Table 2 Genes most induced by OVA in WT mice

Agilent probe ID	Symbol	Description	Fold increase		Adjusted *p* WT OVA vs. β6 KO OVA
			WT *	β6 KO **	
A_51_P335460	*Clca3*	Chloride channel calcium activated 3	36.5	36.8	NS
A_51_P335460	*Scin*	Scinderin	22.4	11.4	NS
A_51_P169476	*Mcpt1*	Mast cell protease 1	18.2	1.9	< 0.05
A_51_P147987	*Itln*	Intelectin	9.2	13.6	NS
A_51_P434567	*Adra2a*	Adrenergic receptor, α2a	9.0	4.1	NS
A_52_P379474	ENSMUST00000043170	Unknown	8.9	12.5	NS
A_52_P67493	*Adra2a*	Adrenergic receptor, α2a	8.7	4.5	NS
A_51_P173114	*Pcdh21*	Protocadherin 21	6.7	3.4	NS

* Values represent fold increase with significant (adjusted *P*< 0.01) changes in epithelium from OVA-treated WT mice compared to saline-treated WT mice.

** Values represent fold increase in epithelium from OVA-treated β6 KO mice compared to saline-treated β6 KO mice.