Supplementary Table S1. QuantiGene Plex 2.0 multiplex assay target RNA transcripts

Gene	MC-related function	PubMed Reference ID
CCL2 (MCP-1)*	Induces degranulation	23482464
CCL5 (RANTES)	MC chemotaxis	12270118
CXCL10 (IP-10)	MC chemotaxis	15879427
ICAM-1	Upregulated by MC activity	7559805
IFNa4	Inhibits MC histamine release	2469645
IFNg	Apoptotic for MC progenitors	16116187
IL-1b	Increases MC cytokine production	10820229
IL-6*	Promotes host defense	18832718
IL-10*	Immune tolerance	23415912
IL-17a*	Pro-arthritic	20200272
IL-18*	Promotes host defense	17075246
IL-33	MC activation following tissue injury	21239713
KitL (SCF)	Required for MC development	7508684
NGF*	Neuro-immune interactions	8170980
Nos2 (iNOS)*	Response to tissue ischemia	10744078
PECAM1	PBMC expression linked to MCs	16211461
TNFa*	Pleiotropic effects	1709737
Vegfa*	Angiogenesis	23755748
HPRT	Reference gene	n/a
Polr2a	Reference gene	n/a

CCL2 (MIP-1), chemokine ligand 2 (monocyte chemotactic protein 1); CCL5 (RANTES), chemokine ligand 5 (regulated on activation, normal T cell expressed and secreted), CXCL10 (IP-10), C-X-C motif chemokine 10 (interferon gamma-induced protein 10); HPRT, hypoxanthine phosphoribosyltransferase; ICAM-1, intercellular adhesion molecule 1; IFNa4, interferon alpha 4; IFNg, interferon gamma; IL, interleukin; KitL (SCF), kit ligand (stem cell factor); NGF, nerve growth factor; Nos2 (iNOS), nitric oxide synthase 2 (inducible nitric oxide synthase); PECAM, platelet endothelial cell adhesion molecule; Polr2a, polymerase (RNA) II polypeptide a; TNFa, tumor necrosis factor alpha; VEGF-A, vascular endothelial growth factor a. * denotes gene is a known MC product.

Supplementary Figure Legends

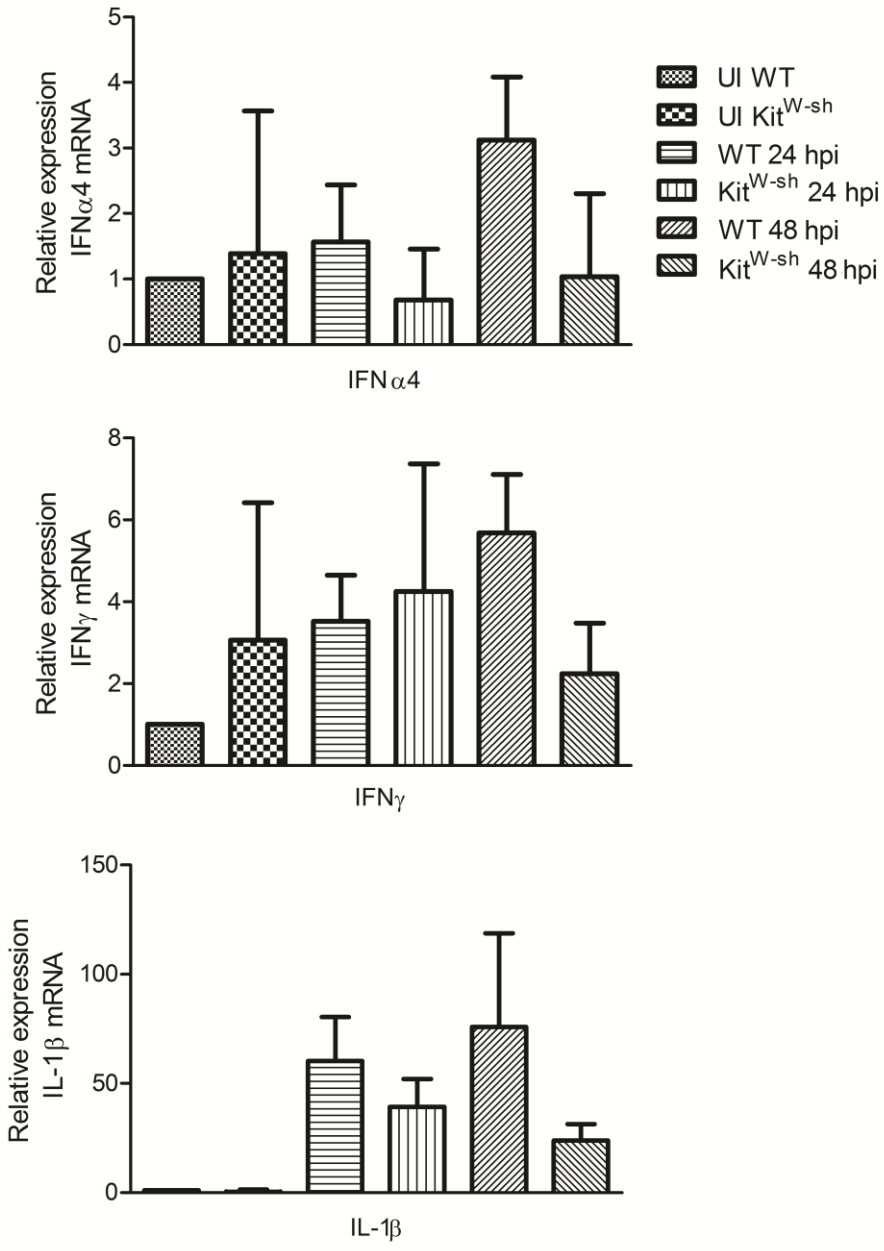
Supplementary Figure S1

Multiplex mRNA transcript analysis of MC-associated genes. Of 18 genes analyzed (see Supplementary Table 1) in UI mice and at 24 and 48 hours pi, non-significant trends were observed for elevated IFNα4, IFNγ, and IL-1β expression in WT relative to $Kit^{W\text{-}sh}$ corneolimbal buttons at 48 hours pi. Results show gene expression relative to the geometric mean of 2 reference genes in individual corneolimbal buttons. Analysis represents tissue from 4 mice per group per time point shown as mean ± SEM.

Supplementary Figure S2

MC-granule products histamine and TNFα do not impact viral titer *in vivo* at 48 hours pi. 1xPBS or 1xPBS containing 1 or 100 μM histamine was applied to the corneas of WT (a) and separately in $Kit^{W\text{-}sh}$ mice (b) at the time of infection. By 48 hours pi, there was no impact on HSV-1 titer in corneas of WT mice by plaque assay (n = 5-6 mice per group; 3 independent experiments). The addition of histamine influenced HSV-1 titer in the corneas of $Kit^{W\text{-}sh}$ mice (n = 3 mice/group; 2 independent experiments). (c) HSV-1 titer was also compared in the corneas of WT and $TNF\alpha^{-/-}$ mice at 48 hours pi (n = 4 mice per group; 3 independent experiments).

Supplementary Figure S1



Supplementary Figure S2