

Extended Data Table 1 | Amino acid divergence in proteins from *C. atys* identified by the immunogenomic comparison pipeline

Gene	Function	RM length (aa)	SM length (aa)	Identity (%)
CD24	B cell and granulocyte activation/differentiation	78	77	88.5
APOBEC3C	retroviral restriction factor	190	190	91.6
DEFB129	antimicrobial	183	183	94.5
CLEC2D	inhibits NK-cell-mediated lysis	198	199	94.5
GZMA	cell lysis mediated by CD8+ T cells and NK cells	262	262	94.7
PGLYRP1	Peptidoglycan recognition on gram-positive bacteria	196	196	94.9
CCL24	chemoattractant for resting T cells	119	119	95.0
C5AR1	complement receptor	350	350	95.1
BST2	retroviral restriction factor	182	182	95.6
PF4	coagulation, chemoattractant for neutrophils and monocytes	196	196	96.0
S100A7	antimicrobial, immunomodulatory	101	101	96.0
CLEC6A	mannose-dependent pathogen recognition, proinflammatory	209	209	96.2
MB21D1	antiviral, cytosolic DNA sensor	522	522	96.2
BPI	antimicrobial, LPS-sensing	487	487	96.3
PRG3	cytotoxic and cytostimulatory activities	225	225	96.4
GSDMD	antimicrobial, pyroptosis	484	484	96.5
CLEC4A	Pattern recognition receptor	204	204	96.6
CLEC4D	inflammation and immune responses	215	215	96.7
PPBP	chemoattractant and activator of neutrophils	128	128	96.8
CD4	T cell receptor activation, HIV/SIV receptor	458	458	96.9
CTSG	lysosomal antigen processing	255	255	96.9
CD33	adhesion molecule on myeloid cells	359	359	96.9
LY96/MD2	associates with TLR4 for LPS binding	160	160	96.9
CCL11	chemoattractant for eosinophils	97	97	96.9

aa, amino acids.