Table 1 Class IV semaphorins implicated in the pathogenesis of autoimmune diseases

Semaphorins	Related diseases	Expression	Receptor	Associated functions
Sema4A	Retinitis pigmentosa [17,19,20]	RPE	Not applicable	Endosomal sorting [18]
	Multiple sclerosis [25]	DCs T_H1 cells	Plexin Bs Plexin D1 TIM2	T_H17 cell differentiation [25] T_H1 cell differentiation [13]
	Allergic asthma [33]	T_H2 cells T_H1 cells	TIM2	T_H1/T_H2 cell differentiation [13]
	Allergic dermatitis [33]	T_H2 cells T_H1 cells	TIM2	T_H1/ T_H2 cell differentiation [13]
	Eosinophilic chronic rhinosinusitis [35]	Eosinophils	Not examined	Activation of IL-5R/STAT5-dependent pathway [35]
	Inflammatory bowel disease [36]	Lymphocytes	Not examined	Unknown
	Systemic sclerosis [39]	Monocytes T_H cells	Plexin D1 Plexin B2 Nrp1	Cytokine production from T_H17 cells [39] Activation of fibroblasts [39]
Sema4D	ANCA-associated vasculitis [66]	Neutrophils	Plexin B2	Inactivation of neutrophils [66]
	Kawasaki disease [67]	Neutrophils	Plexin B1 Plexin B2	Cytokine production from coronary endothelial cells [67]

	Rheumatoid arthritis [70]	Lymphocytes Monocytes	Not examined	Cytokine production from monocytes [70]
	Eosinophilic chronic rhinosinusitis [77]	Eosinophils	Plexin B1	Transendothelial migration of eosinophils [77]
	Primary sclerosing cholangitis [78]	T cells	Not examined	IFN-γ production [78]
	Osteoporosis/Osteopetrosis [7, 83]	Osteoclasts	Plexin B1	Osteoblast activation [7]

Annotated numbers correspond to reference numbers in the main text. Abbreviation: RPE, retinal pigment epithelium; DCs, dendritic cells; T_H1, type 1 helper T; T_H2, type 2 helper T; T_H17, T helper 17; TIM-2, T-cell, immunoglobulin, and mucin domain protein 2; IL-5R, interleukin-5 receptor; STAT5, signal transducer and activator of transcription 5; Nrp1, neuropilin-1; ANCA, antineutrophil cytoplasmic antibody; IFN-γ, interferon gamma.