



Title	Class IV semaphorins in disease pathogenesis
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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.