Recombinant mouse FLT3L

Catalog No: #AG0046

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Description

Product Name	Recombinant mouse FLT3L
Host Species	HEK293
Purification	> 95% by Tris-Bis PAGE;> 95% by SEC-HPLC
Immunogen Description	Gly27-Arg188
Target Name	FLT3L
Other Names	FL; FLG3L; Flt3 ligand; Flt-3 Ligand; Flt3L; FLT3LG; fms-related tyrosine kinase 3 ligand; SL cytokine
Accession No.	Uniprot:P49772Gene ID:14256
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GeneID	14256
Target Species	mouse
Calculated MW	18.4 KDa
Tag Info	addtional amino acid free
Formulation	0.22 μm filtered solution of PBS, pH 7.4.
Storage	Aliquot and store at -80°C. Avoid repeated freeze/thaw cycles.

Background

Flt-3 Ligand, also known as FLT3L, is an alpha-helical cytokine that promotes the differentiation of multiple hematopoietic cell lineages (1-3). Mature mouse Flt?3 Ligand consists of a 161 amino acid (aa) extracellular domain (ECD) with a cytokine-like domain and a juxtamembrane tether region, a 21 aa transmembrane segment, and a 22 aa cytoplasmic tail (4-6). Within the ECD, mouse Flt-3 Ligand shares 71% and 81% aa sequence identity with human and rat Flt-3 Ligand, respectively. The mouse and human Flt-3 Ligand proteins show cross-species activity (4, 5, 7). Flt-3 Ligand is also structurally related to M-CSF and SCF. Flt-3 Ligand is widely expressed in various mouse and human tissues. Flt-3 Ligand is expressed as a noncovalently-linked dimer by T cells and bone marrow and thymic fibroblasts (1, 8). Each 36 kDa chain of the Flt-3 Ligand dimer carries approximately 12 kDa of N- and O?linked carbohydrates (8). Alternate splicing and proteolytic cleavage of the transmembrane form of the Flt-3 Ligand protein can generate a soluble 30 kDa fragment that includes the cytokine-like domain (4, 8). Alternate splicing of mouse Flt-3 Ligand also generates a membrane-associated isoform with a 57 aa substitution following the cytokine-like domain in the ECD of the Flt-3 Ligand protein (4, 5, 8, 9). Both transmembrane and soluble Flt-3 Ligand signal through the tyrosine kinase receptor Flt-3/Flk-2 (3 - 6). Flt-3 Ligand induces the expansion of monocytes and immature dendritic cells as well as early B cell lineage differentiation (2, 10). Additionally, Flt-3 Ligand synergizes with IL-3, GM?CSF, and SCF to promote the mobilization and myeloid differentiation of hematopoietic stem cells (4, 5, 7). Flt-3 Ligand also cooperates with IL?2, IL-6, IL-7, and IL-15 to induce NK cell development and with IL-3, IL-7, and IL?11 to induce terminal B cell maturation (1, 11). Animal studies also show that Flt-3 Ligand reduces the severity of experimentally induced allergic inflammation (12).

Note: This product is for in vitro research use only