

**DESCRIPTION**

**Source** Mouse myeloma cell line, NS0-derived  
Gly27-Arg188  
Accession # P49772.1

**N-terminal Sequence Analysis** Gly27

**Predicted Molecular Mass** 18 kDa

**SPECIFICATIONS**

**SDS-PAGE** Multiple bands between 18-32 kDa, reducing conditions

**Activity** Measured in a cell proliferation assay using BaF3 mouse pro-B cells transfected with mouse Flt-3. The ED<sub>50</sub> for this effect is typically 0.4-2.4 ng/mL.

**Endotoxin Level** <0.10 EU per 1 µg of the protein by the LAL method.

**Purity** >97%, by SDS-PAGE under reducing conditions and visualized by silver stain.

**Formulation** Lyophilized from a 0.2 µm filtered solution in Acetonitrile and TFA. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

**Reconstitution** Reconstitute at 50 µg/mL in sterile PBS.

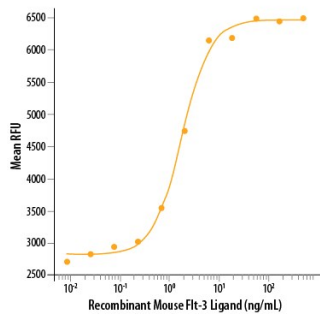
**Shipping** The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.

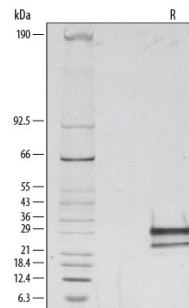
**DATA**

**Bioactivity**



Recombinant Mouse Flt-3 Ligand (Catalog # 427-FL/CF) stimulates cell proliferation in the BaF3 mouse pro-B cell line transfected with mouse Flt-3. The ED<sub>50</sub> for this effect is typically 0.4-2.4 ng/mL.

**SDS-PAGE**



1 µg/lane of Recombinant Mouse Flt-3 Ligand was resolved with SDS-PAGE under reducing (R) conditions and visualized by silver staining, showing multiple bands between 18-32 kDa. The multiple bands are due to variable glycosylation of the protein.

**BACKGROUND**

Flt-3 Ligand, also known as FL, 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. Mouse and human Flt-3 Ligand show cross-species activity (4, 5, 7). 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 carries approximately 12 kDa of N- and O-linked carbohydrates (8). Alternate splicing and proteolytic cleavage of the transmembrane form can generate a soluble 30 kDa fragment that includes the cytokine domain (4, 8). Alternate splicing of mouse Flt-3 Ligand also generates a membrane-associated isoform with a 57 aa substitution following the cytokine domain (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). It synergizes with IL-3, GM-CSF, and SCF to promote the mobilization and myeloid differentiation of hematopoietic stem cells (4, 5, 7). It cooperates with IL-2, -6, -7, and -15 to induce NK cell development and with IL-3, -7, and -11 to induce terminal B cell maturation (1, 11). Animal studies also show Flt-3 Ligand to reduce the severity of experimentally induced allergic inflammation (12).

**References:**

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