

DESCRIPTION

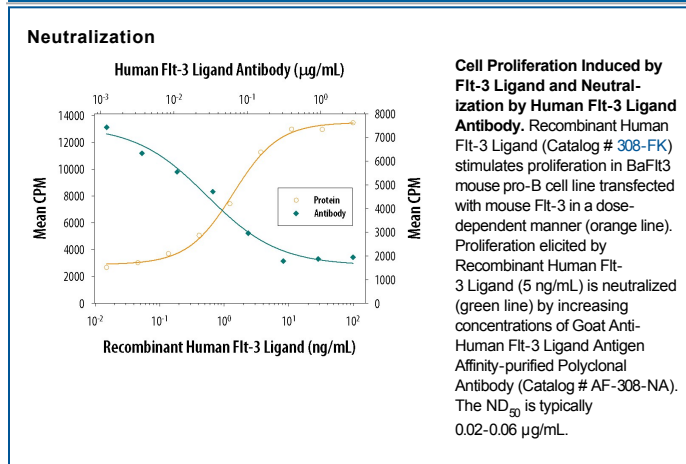
Species Reactivity	Human
Specificity	Detects human Flt-3 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant mouse Flt-3 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf21-derived recombinant human Flt-3 Ligand Thr27-Pro185 Accession # AAA17999
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human Flt-3 Ligand (Catalog # 308-FK)
Neutralization	Measured by its ability to neutralize Flt-3 Ligand-induced proliferation in BaFlt3 mouse pro-B cell line transfected with mouse Flt-3. Hannum, C. <i>et al.</i> (1994) <i>Nature</i> 368 :643. The Neutralization Dose (ND ₅₀) is typically 0.02-0.06 µg/mL in the presence of 5 ng/mL Recombinant Human Flt-3 Ligand.	

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Flt-3 Ligand, also known as FL, is an α -helical cytokine that promotes the differentiation of multiple hematopoietic cell lineages (1-3). Mature human Flt-3 Ligand consists of a 158 amino acid (aa) extracellular domain (ECD) with a cytokine-like domain and a juxtamembrane tether region, a 21 aa transmembrane segment, and a 30 aa cytoplasmic tail (4-7). Within the ECD, human Flt-3 Ligand shares 71% and 65% aa sequence identity with mouse and rat Flt-3 Ligand, respectively. Human and mouse Flt-3 Ligand show cross-species activity (4-6). 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 human Flt-3 Ligand also generates membrane-associated isoforms that contain either a truncated cytoplasmic tail or an 85 aa substitution following the cytokine domain (4, 5, 8). Both transmembrane and soluble Flt-3 Ligand signal through the tyrosine kinase receptor Flt-3/Flk-2 (3, 4, 6, 7). Flt-3 Ligand induces the expansion of monocytes and immature dendritic cells as well as early B cell lineage differentiation (2, 9). It synergizes with IL-3, GM-CSF, and SCF to promote the mobilization and myeloid differentiation of hematopoietic stem cells (4-6). 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, 10). Animal studies also show Flt-3 Ligand to reduce the severity of experimentally induced allergic inflammation (11).

References:

1. Wodnar-Filipowicz, A. (2003) *News Physiol. Sci.* **18**:247.
2. Dong, J. *et al.* (2002) *Cancer Biol. Ther.* **1**:486.
3. Gilliland, D.G. and J.D. Griffin (2002) *Blood* **100**:1532.
4. Hannum, C. *et al.* (1994) *Nature* **368**:643.
5. Lyman, S.D. *et al.* (1994) *Blood* **83**:2795.
6. Lyman, S.D. *et al.* (1993) *Cell* **75**:1157.
7. Savvides, S.N. *et al.* (2000) *Nat. Struct. Biol.* **7**:486.
8. McClanahan, T. *et al.* (1996) *Blood* **88**:3371.
9. Diener, K.R. *et al.* (2008) *Exp. Hematol.* **36**:51.
10. Farag, S.S. and M.A. Caligiuri (2006) *Blood Rev.* **20**:123.
11. Edwan, J.H. *et al.* (2004) *J. Immunol.* **172**:5016.