Mouse Flt-3 Ligand Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF427

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Flt-3 Ligand in ELISAs and Western blots. In sandwich immunoassays, less than 0.1% cross-reactivity with recombinant human Flt-3 Ligand is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Flt-3 Ligand Gly27-Arg188 Accession # P49772
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.

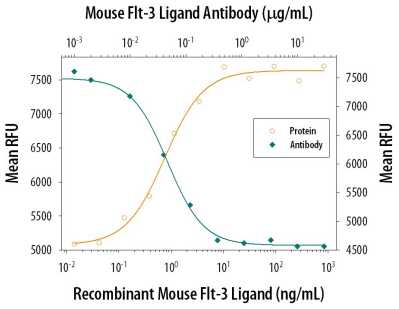
APPLICATIONS

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 Mouse Flt-3 Ligand (Catalog # 427-FL)
Immunocytochemistry	5-15 µg/mL	See Below
Mouse Flt-3 Ligand Sandwich Immunoassay		**Reagent**
ELISA Capture	0.2-0.8 µg/mL	Mouse Flt-3 Ligand Antibody (Catalog # AF427)
ELISA Detection	0.1-0.4 µg/mL	Mouse Flt-3 Ligand Biotinylated Antibody (Catalog # BAF427)
Standard		Recombinant Mouse Flt-3 Ligand (Catalog # 427-FL)
Neutralization	Measured by its ability to neutralize Flt-3 Ligand-induced proliferation in BaF3 mouse pro-B cell line transfected with mouse Flt-3. Hannum, C. *et al.* (1994) Nature **368**:643. The Neutralization Dose (ND_{50}) is typically 0.05-0.25 µg/mL in the presence of 10 ng/mL Recombinant Mouse Flt-3 Ligand.	

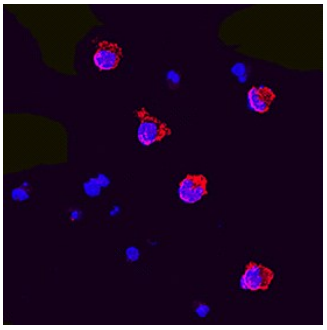
DATA

Neutralization



Cell Proliferation Induced by Flt-3 Ligand and Neutralization by Mouse Flt-3 Ligand Antibody. Recombinant Mouse Flt-3 Ligand (Catalog # 427-FL) stimulates proliferation in BaF3 mouse pro-B cell line transfected with mouse Flt-3 in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Mouse Flt-3 Ligand (10 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Mouse Flt-3 Ligand Antigen Affinity-purified Polyclonal Antibody (Catalog # AF427). The ND_{50} is typically 0.05-0.25 µg/mL.

Immunocytochemistry



Flt-3 Ligand in HT-2 Mouse Cell Line. Flt-3 Ligand was detected in immersion fixed HT-2 mouse T cell line using Goat Anti-Mouse Flt-3 Ligand Antigen Affinity-purified Polyclonal Antibody (Catalog # AF427) at 5 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

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.** ● 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.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

Mouse Flt-3 Ligand Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF427

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 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:

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.* (1993) Cell **75**:1157.
6. Savvides, S.N. *et al.* (2000) Nat. Struct. Biol. **7**:486.
7. Lyman, S.D. *et al.* (1994) Blood **83**:2795.
8. McClanahan, T. *et al.* (1996) Blood **88**:3371.
9. Lyman, S.D. *et al.* (1995) Oncogene **10**:149.
10. Diener, K.R. *et al.* (2008) Exp. Hematol. **36**:51.
11. Farag, S.S. and M.A. Caligiuri (2006) Blood Rev. **20**:123.
12. Edwan, J.H. *et al.* (2004) J. Immunol. **172**:5016.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956