Mouse SCF/c-kit Ligand Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF-455-NA

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse SCF/c-kit Ligand in ELISAs and Western blots. In Western blots, less than 20% cross-reactivity with recombinant human SCF is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant mouse SCF/c-kit Ligand Lys26-Ala189 Accession # Q78ED8
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 either lyophilized or as a 0.2 µm filtered solution in PBS.

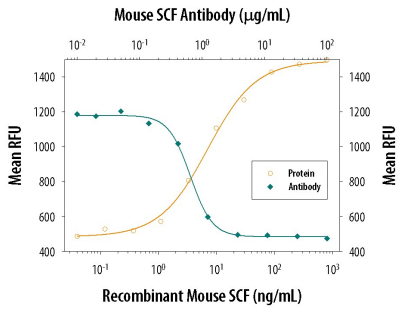
APPLICATIONS

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 SCF/c-kit Ligand (Catalog # 455-MC)
Mouse SCF/c-kit Ligand Sandwich Immunoassay		**Reagent**
ELISA Capture	0.2-0.8 µg/mL	Mouse SCF/c-kit Ligand Antibody (Catalog # AF-455-NA)
ELISA Detection	0.1-0.4 µg/mL	Mouse SCF/c-kit Ligand Biotinylated Antibody (Catalog # BAF455)
Standard		Recombinant Mouse SCF/c-kit Ligand (Catalog # 455-MC)
Neutralization	Measured by its ability to neutralize SCF/c-kit Ligand-induced proliferation in the TF-1 human erythroleukemic cell line [Kitamura, T. *et al.* (1989) J. Cell Physiol. **140**:323]. The Neutralization Dose (ND_{50}) is typically 0.3-0.6 µg/mL in the presence of 25 ng/mL Recombinant Mouse SCF/c-kit Ligand.	

DATA

Neutralization



Cell Proliferation Induced by SCF/c-kit Ligand and Neutralization by Mouse SCF/c-kit Ligand Antibody. Recombinant Mouse SCF/c-kit Ligand (Catalog # 455-MC) stimulates proliferation in the TF-1 human erythroleukemic cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Mouse SCF/c-kit Ligand (25 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Mouse SCF/c-kit Ligand Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-455-NA). The ND_{50} is typically 0.3-0.6 µg/mL.

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.

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BACKGROUND

Stem cell factor (SCF), also known as c-kit ligand (KL), mast cell growth factor (MGF), and steel factor (SLF), is a widely expressed 28-40 kDa type I transmembrane glycoprotein (1). It promotes the survival, differentiation, and mobilization of multiple cell types including myeloid, erythroid, megakaryocytic, lymphoid, germ cell, and melanocyte progenitors (1-7). SCF is a primary growth and activation factor for mast cells and eosinophils (8). Mature mouse SCF consists of a 189 amino acid (aa) extracellular domain (ECD), a 23 aa transmembrane segment, and a 36 aa cytoplasmic tail (9). The ECD shows both N-linked and O-linked glycosylation (10). Proteolytic cleavage at two alternate sites in the extracellular juxtamembrane region releases a 25 kDa soluble molecule which is comparable to the only form produced by Steel-dickie mutant mice (11, 12). An alternately spliced isoform of mouse SCF lacks 28 aa that encompasses the primary proteolytic recognition site (13). Within the ECD of the short isoform (corresponding to this recombinant protein), mouse SCF shares 93% aa sequence identity with rat SCF and 72-75% with canine, feline, and human SCF. Rat SCF is active on mouse and human cells, but human SCF is only weakly active on mouse cells (14). Non-covalent dimers of transmembrane or soluble SCF interact with the receptor tyrosine kinase SCF R/c-kit to trigger receptor dimerization and signaling (15). SCF assists in the recovery of cardiac function following myocardial infarction by increasing the number of cardiomyocytes and vascular channels (16).

References:

1. Ashman, L.K. (1999) Int. J. Biochem. Cell Biol. **31**:1037.
2. Sette, C. *et al.* (2000) Int. J. Dev. Biol. **44**:599.
3. Yoshida, H. *et al.* (2001) J. Invest. Dermatol. Symp. Proc. **6**:1.
4. Erlandsson, A. *et al.* (2004) Exp. Cell Res. **301**:201.
5. Kapur, R. *et al.* (2002) Blood **100**:1287.
6. Wang, C.-H. *et al.* (2007) Arterioscler. Thromb. Vasc. Biol. **27**:540.
7. Bashamboo, A. *et al.* (2006) J. Cell Sci. **119**:3039.
8. Reber, L. *et al.* (2006) Eur. J. Pharmacol. **533**:327.
9. Huang, E. *et al.* (1990) Cell **63**:225.
10. Arakawa, T. *et al.* (1991) J. Biol. Chem. **266**:18942.
11. Majumdar, M.K. *et al.* (1994) J. Biol. Chem. **269**:1237.
12. Brannan, C.I. *et al.* (1991) Proc. Natl. Acad. Sci. USA **88**:4671.
13. Flanagan, J.G. *et al.* (1991) Cell **64**:1025.
14. Martin, F.H. *et al.* (1990) Cell **63**:203.
15. Lemmon, M.A. *et al.* (1997) J. Biol. Chem. **272**:6311.
16. Kanellakis, P. *et al.* (2006) Cardiovasc. Res. **70**:117.

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