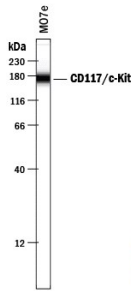


DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human CD117/c-kit in ELISAs and Western blots. In sandwich immunoassays and Western blots, no cross-reactivity with recombinant mouse CD117 is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 47233
Purification	Protein A or G purified from ascites
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human CD117/c-kit Gln26-Thr520 Accession # P10721
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. <i>General Protocols</i> are available in the <i>Technical Information</i> section on our website.	
	Recommended Concentration
Western Blot	1 µg/mL
Flow Cytometry	2.5 µg/10 ⁶ cells
Simple Western	10 µg/mL
Human CD117/c-kit Sandwich Immunoassay	
ELISA Capture	2-8 µg/mL
ELISA Detection Standard	0.1-0.4 µg/mL
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.
Neutralization	Measured by its ability to neutralize SCF/c-kit Ligand-induced proliferation in the TF-1 human erythroleukemic cell line. The Neutralization Dose (ND ₅₀) is typically 0.5-2.5 µg/mL in the presence of 4 ng/mL Recombinant Human SCF/c-kit Ligand.

DATA	
<p>Neutralization</p> <p>Cell Proliferation Induced by SCF/c-kit Ligand and Neutralization by Human CD117/c-kit Antibody. Recombinant Human SCF/c-kit Ligand (Catalog # 255-SC) stimulates proliferation in the TF-1 human erythroleukemic cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Human SCF/c-kit Ligand (4 ng/mL) is neutralized (green line) by increasing concentrations of Mouse Anti-Human CD117/c-kit Monoclonal Antibody (Catalog # MAB332). The ND₅₀ is typically 0.5-2.5 µg/mL.</p>	<p>Western Blot</p> <p>Detection of Human CD117/c-kit by Western Blot. Western blot shows lysates of MO7e human megakaryocytic leukemic cell line. PVDF membrane was probed with 1.0 µg/mL of Mouse Anti-Human CD117/c-kit Monoclonal Antibody (Catalog # MAB332) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for CD117/c-kit at approximately 150 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>

Simple Western



Detection of Human CD117/c-kit by Simple Western™. Simple Western lane view shows lysates of MO7e human megakaryocytic leukemic cell line, loaded at 0.2 mg/mL. A specific band was detected for CD117/c-kit at approximately 172 kDa (as indicated) using 10 µg/mL of Mouse Anti-Human CD117/c-kit Monoclonal Antibody (Catalog # MAB332). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 0.5 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.

BACKGROUND

Stem cell factor receptor (CD117, the gene product of the *c-kit* proto-oncogene) and its ligand, stem cell factor (also named c-kit ligand, mast cell growth factor), play essential roles in gametogenesis, melanogenesis, and hematopoiesis. The human stem cell factor receptor cDNA encodes a 972 amino acid (aa) residue precursor membrane protein with a 25 aa residue signal peptide (experimentally determined), a 495 aa residue extracellular domain, a 23 aa residue transmembrane segment, and a 429 aa residue cytoplasmic domain. Stem cell factor receptor is a member of the type III subfamily of receptor tyrosine kinases (RTK) that also includes the receptors for M-CSF, Flt-3, PDGF, and VEGF. All class III RTKs are characterized by the presence of five immunoglobulin-like domains in their extracellular region and a split kinase domain in their intracellular region. SCF binding induces receptor homodimerization and signal transduction. SCF receptor is expressed in hematopoietic progenitor cells, normal B and T lymphocyte progenitor cells, mast cells, germ cells, melanocytes, neurons, glial cells, placenta, kidney, lung, and gut. In addition, SCF receptor expression has also been reported in a number of human tumor cell lines. SCF receptor can be proteolytically cleaved from the cell surface and high levels of soluble SCF receptor has been detected in cell conditioned medium and human plasma. Recombinant soluble SCF receptor binds SCF with high affinity and is a potent SCF antagonist.

References:

1. Broudy, V. (1997) Blood **90**:1345.
2. Vliagoftis, H. *et al.* (1997) J. Allergy Clin. Immunol. **100**:435.