

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CD117/c-kit in Western blots.
Source	Polyclonal Rabbit IgG
Purification	Antigen Affinity-purified
Immunogen	Human CD117/c-kit synthetic peptide Asp716-Pro726 Accession # P10721
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.

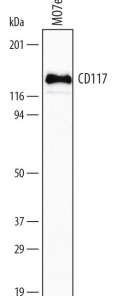
APPLICATIONS

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	0.5 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	Immersion fixed paraffin-embedded sections of human brain (cerebellum)
Simple Western	5 µg/mL	See Below

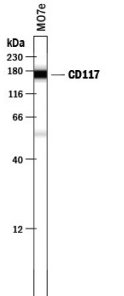
DATA

Western Blot




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 0.5 µg/mL of Rabbit Anti-Human CD117/c-kit Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3267) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). A specific band was detected for CD117/c-kit at approximately 145 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

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 5 µg/mL of Rabbit Anti-Human CD117/c-kit Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3267). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



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

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.