RD SYSTEMS a biotechne brand

Antigen Affinity-purified Polyclonal Rabbit IgG Catalog Number: AF3267

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 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	0.5 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

kDa

201

116 94

50

37 -29 -19 -

Western Blot

CD117

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 HRPconjugated 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.



Detection of Human CD117/c-kit by Simple WesternTM. 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 Antii-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.

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.

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, FIt-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 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.

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