

## Technical Data Sheet

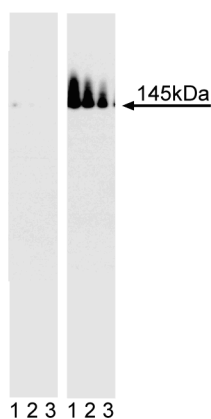
**Purified Mouse Anti-CD117 (pY568/pY570)****Product Information**

<b>Material Number:</b>	558390
<b>Alternate Name:</b>	c-kit
<b>Size:</b>	0.1 mg
<b>Concentration:</b>	0.5 mg/ml
<b>Clone:</b>	K39-686
<b>Immunogen:</b>	Human c-kit (pY568/pY570) peptide
<b>Isotype:</b>	Mouse IgG1, $\kappa$
<b>Reactivity:</b>	QC Testing: Human
<b>Target MW:</b>	145 kDa
<b>Storage Buffer:</b>	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

**Description**

CD117 (also known as c-kit) is a transmembrane tyrosine kinase receptor that binds stem cell factor (SCF, also known as kit ligand, mast cell growth factor, and steel factor) and is involved in the regulation of a wide range of tissues at various developmental stages. CD117 has been reported to play major roles in the regulation of hematopoiesis and germ cell proliferation and survival. Mutations of c-kit are associated with a wide variety of cancers and developmental diseases. Upon activation by its ligand, CD117 (c-kit) has been reported to dimerize and autophosphorylate at multiple cytoplasmic sites, which bind to downstream signal transduction molecules. Specifically, the phosphorylated tyrosines 568 and 570 (pY568/pY570) in the juxtamembrane domain of c-kit bind to several signaling molecules, including the adapter proteins SHC and APS; the tyrosine kinases Lyn, Fyn, and CHK; and the protein tyrosine phosphatase SHP-2, all of which may interact to regulate SCF signaling. The K39-686 clone has been reported to recognize the phosphorylated pY568/pY570 of human c-kit. The orthologous phosphorylation sites in mouse c-kit are pY567 and pY569.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



**Western blot analysis of CD117 (pY568/pY570) in human erythroleukemia cells.** Lysates from control (left panel) and SCF-treated (Cat. No. 354105, right panel) HEL cells were probed with purified mouse anti-CD117 (pY568/pY570) monoclonal antibody at concentrations of 0.125, 0.0625, and 0.032  $\mu\text{g/ml}$  (lanes 1, 2, and 3, respectively). CD117 (pY568/pY570) is identified as a band of 145 kDa in the treated cells.

**Preparation and Storage**

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Store undiluted at 4° C.

**Application Notes****Application**

Western blot

Routinely Tested

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**Recommended Assay Procedure:**

**Western blot:** Please refer to [http://www.bdbiosciences.com/pharming/en/protocols/Western\\_Blotting.shtml](http://www.bdbiosciences.com/pharming/en/protocols/Western_Blotting.shtml)

**Suggested Companion Products**

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
554002	HRP Goat Anti-Mouse Igs	1.0 ml	(none)

**Product Notices**

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to [www.bdbiosciences.com/pharming/en/protocols](http://www.bdbiosciences.com/pharming/en/protocols) for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

**References**

Price DJ, Rivnay B, Fu Y, Jiang S, Avraham S, Avraham H. Direct association of Csk homologous kinase (CHK) with the diphosphorylated site Tyr 568/570 of the activated c-KIT in magakaryocytes. *J Biol Chem.* 1997; 272(9):5915-5920.(Biology)  
Ronnstrand L. Signal transduction via the stem cell factor receptor/c-Kit. *Cell Mol Life Sci.* 2004; 61:2535-2548.(Biology)