

PRODUCT INFORMATION



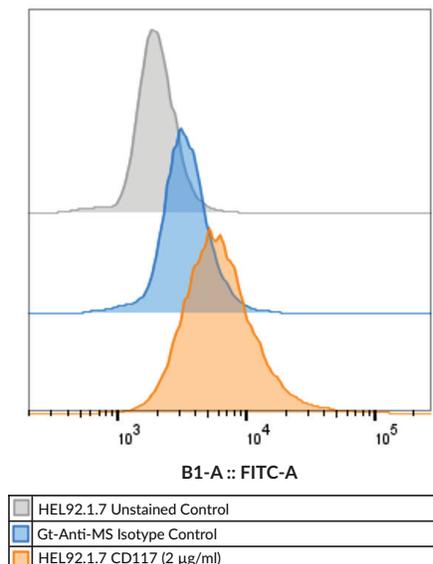
c-Kit/CD117 Monoclonal Antibody (Clone BA7.3C.9)

Item No. 43306

Overview and Properties

| | |
|----------------------------|---|
| Contents: | This vial contains 100 µg of protein G-purified monoclonal antibody |
| Synonyms: | Cluster of Differentiation 117, Mast/Stem Cell Growth Factor Receptor Kit, Proto-oncogene c-Kit, v-Kit Hardy-Zuckerman 4 Feline Sarcoma Viral Oncogene Homolog, SCFR |
| Immunogen: | Erythroleukemia cell line OCIM1 |
| Cross Reactivity: | (+) c-Kit |
| Species Reactivity: | (+) Human |
| Form: | Liquid |
| Storage: | -20°C (as supplied) |
| Stability: | ≥1 year |
| Storage Buffer: | PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide |
| Clone: | BA7.3C.9 |
| Host: | Mouse |
| Isotype: | IgG2a |
| Applications: | Flow cytometry (FC) and Western blot (WB; the recommended starting dilution is for FC is 1:500 and 1:200 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically. |

Image



HEL92.1.7 cells were fixed with 4% PFA and blocked with 1% FBS. Cells were probed with c-Kit/CD117 Monoclonal Antibody (Clone BA7.3C.9) at 2 µg/ml and Goat Anti-Mouse (IgG+IgM) FITC (Item No. 10006617) as a secondary antibody.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

c-Kit, also known as CD117, is a type III receptor tyrosine kinase involved in the proliferation, differentiation, and survival of hematopoietic cells.^{1,2} It is composed of an N-terminal extracellular domain containing five immunoglobulin-like (Ig-like) domains, short transmembrane and juxtamembrane domains, and a C-terminal intracellular region containing the kinase domain. It is expressed in hematopoietic stem and progenitor cells, as well as certain non-hematopoietic tissues.² c-Kit is activated by the binding of its ligand, stem cell factor (SCF), to the extracellular region, which induces autophosphorylation and the recruitment of signaling molecules to the intracellular region.¹ c-Kit signal transduction activates a variety of signaling pathways, including the PI3K/Akt, RAS/MAPK, and JAK/STAT pathways.^{1,2} Homozygous knockout of *Kit*, the gene encoding c-Kit, is embryonic lethal, with mice developing severe anemia *in utero*.³ *KIT* is considered a proto-oncogene and activating mutations have been associated with a variety of cancers.^{1,2} Cayman's c-Kit/CD117 Monoclonal Antibody (Clone BA7.3C.9) can be used for flow cytometry (FC) and Western blot (WB) applications.

References

1. Roskoski, R., Jr. Src protein-tyrosine kinase structure, mechanism, and small molecule inhibitors. *Pharmacol. Res.* **94**, 9-25 (2015).
2. Edling, C.E. and Hallberg, B. c-Kit—a hematopoietic cell essential receptor tyrosine kinase. *Int. J. Biochem. Cell Biol.* **39(11)**, 1995-1998 (2007).
3. Russell, E.S. Hereditary anemias of the mouse: A review for geneticists. *Adv. Genet.* **20**, 357-459 (1979).

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