

PRODUCT INFORMATION

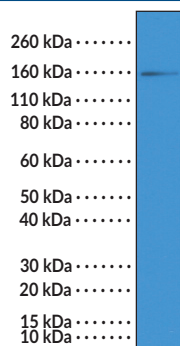
c-Kit/CD117 (C-Term) Rabbit Monoclonal Antibody (Clone RM359)

Item No. 32286

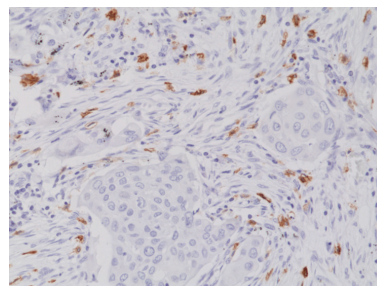
Overview and Properties

Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	Cluster of Differentiation 117, v-Kit Hardy-Zuckerman 4 Feline Sarcoma Viral Oncogene Homolog, Mast/Stem Cell Growth Factor Receptor Kit, Proto-oncogene c-Kit, SCFR
Immunogen:	Peptide from the C-terminal region of human c-Kit
Cross Reactivity:	(+) c-Kit
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM359
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:1,000-1:2,000 for IHC and 1:200-1:1,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

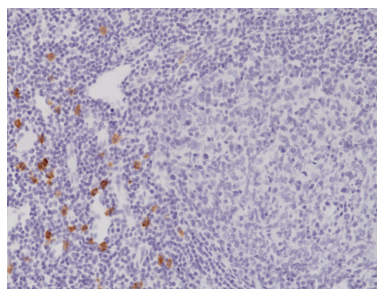
Images



WB of human placenta tissue lysates using c-Kit/CD117 (C-Term) Rabbit Monoclonal Antibody (Clone RM359) at a dilution of 1:200.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human lung cancer tissue using c-Kit/CD117 (C-Term) Rabbit Monoclonal Antibody (Clone RM359) at a dilution of 1:2,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human tonsil tissue using c-Kit/CD117 (C-Term) Rabbit Monoclonal Antibody (Clone RM359) at a dilution of 1:2,000.

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 (C-Term) Rabbit Monoclonal Antibody (Clone RM359) can be used for immunohistochemistry (IHC) 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. *Advance in genetics*. Caspari, E.S., editor, *Academic Press* (1979).

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