KIT Antibody / CD117 Polyclonal Antibody (R31671)

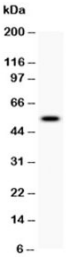
Catalog No.	Formulation	Size
R31671	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

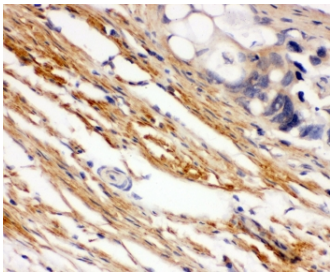
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA, 0.025% sodium azide
Gene ID	3815
Applications	Western blot: 0.5-1ug/ml IHC (FFPE): 0.5-1ug/ml FACS: 1-3ug/10^6 cells
Limitations	This KIT Antibody / CD117 Polyclonal Antibody is available for research use only.



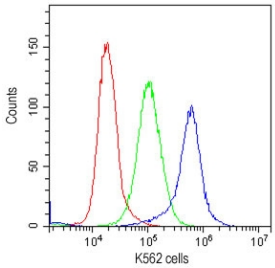
KIT Antibody in HepG2 Cells WB. Western blot testing of HepG2 cell lysate with KIT Antibody. A strong immunoreactive band is detected in the approximately 120-145 kDa region, consistent with the precursor and mature forms of KIT/CD117. The higher apparent molecular weight of mature KIT reflects extensive receptor glycosylation during processing and trafficking to the cell surface. The discrete target-associated signal with minimal additional reactivity demonstrates clean detection of endogenous KIT and supports western blot use of the CD117 Polyclonal Antibody.



KIT Antibody Recombinant Protein WB. Western blot testing of 0.5 ng recombinant human KIT protein with KIT Antibody. A strong, discrete band is detected at approximately 50 kDa, corresponding to the recombinant KIT protein preparation used in the assay. The concentrated target signal and absence of appreciable additional bands demonstrate direct recognition of KIT-derived protein and provide complementary western blot validation for the CD117 Polyclonal Antibody.



KIT Antibody in Human Intestinal Cancer IHC. Immunohistochemistry staining of FFPE human intestinal cancer tissue with KIT Antibody. Distinct brown immunoreactivity is visible within the tissue, with particularly prominent staining in stromal and spindle-shaped cellular regions surrounding tumor structures. The staining is clearly distinguishable from the blue hematoxylin-counterstained nuclei and demonstrates detection of endogenous KIT/CD117 in human tumor tissue, supporting IHC use of the CD117 Polyclonal Antibody.



KIT Antibody in K562 Cells FACS. Flow cytometry analysis of human K562 cells with KIT Antibody at 1 ug/10^6 cells following blocking with goat serum. Cells alone are shown in red, the isotype control in green and KIT Antibody staining in blue. The pronounced rightward shift of the antibody-stained population relative to both controls demonstrates strong detection of cell-surface KIT/CD117 on K562 cells and supports flow cytometry use of the CD117 Polyclonal Antibody.

Description

KIT Antibody / CD117 Polyclonal Antibody recognizes KIT, a transmembrane receptor tyrosine kinase also widely known as c-Kit, CD117 and the stem cell factor receptor. KIT belongs to the type III receptor tyrosine kinase family and contains an extracellular ligand-binding region, a single transmembrane domain and an intracellular split kinase domain. The receptor mediates cellular responses to stem cell factor and has important functions in development, hematopoiesis and tissue homeostasis.

Binding of stem cell factor promotes KIT dimerization and activation of its intracellular kinase domain. Receptor phosphorylation subsequently creates binding sites for intracellular signaling proteins and activates pathways including PI3K/AKT and RAS/MAPK. These signaling networks regulate proliferation, survival, differentiation and migration, allowing KIT to influence the development and maintenance of several specialized cell populations.

CD117 expression is associated with hematopoietic stem and progenitor cells, mast cells, melanocytes and germ cells. KIT signaling contributes to normal hematopoiesis, mast cell development, pigmentation and gametogenesis. Because of this distribution, CD117 is widely investigated as a cellular marker as well as a functional receptor involved in growth-factor-dependent signaling.

Abnormal KIT signaling also has substantial relevance to cancer biology. Activating KIT mutations can cause constitutive receptor signaling and are particularly important in gastrointestinal stromal tumors. KIT alterations or expression are additionally investigated in several hematologic and solid malignancies. These findings have established KIT as both an important disease-associated receptor and a target for small-molecule kinase inhibitors.

NSJ Bioreagents offers this KIT Antibody for research into c-Kit expression and stem cell factor receptor biology. The CD117 Polyclonal Antibody terminology provides an important alternative designation for researchers studying this receptor in hematopoietic, cellular and cancer biology.

A KIT Antibody provides a reagent for investigating c-Kit expression, stem cell factor signaling, hematopoietic development and receptor biology in normal and disease-associated processes.

For a Protein Microarray Validated CD117 antibody with GIST IHC validation, see our CD117 Antibody C117/6347 / c-Kit Monoclonal Antibody.

Application Notes

The stated application concentrations are suggested starting points. Titration of the KIT Antibody / CD117 Polyclonal Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Human partial recombinant protein (AA 26-285) was used as the immunogen for this KIT Antibody. Human protein shares 66% amino acid sequence identity with mouse protein.

Storage

After reconstitution, the KIT Antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

CD117 antibody, c-Kit antibody, Stem Cell Factor Receptor antibody, SCFR antibody, Mast/Stem Cell Growth Factor Receptor Kit antibody

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