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Anti-KIT/SCFR Antibody
Catalog # ABO11949

Specification

Anti-KIT/SCFR Antibody - Product Information

Application	**WB, IHC, FC**
Primary Accession	P10721
Host	**Rabbit**
Reactivity	**Human**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Mast/stem cell growth factor receptor Kit(KIT) detection. Tested with WB, IHC-P, IHC-F, ICC, FCM in Human.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-KIT/SCFR Antibody - Additional Information

Gene ID 3815

Other Names
Mast/stem cell growth factor receptor Kit, SCFR, 2.7.10.1, Piebald trait protein, PBT, Proto-oncogene c-Kit, Tyrosine-protein kinase Kit, p145 c-kit, v-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog, CD117, KIT, SCFR

Calculated MW
109865 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, By Heat
Immunohistochemistry(Frozen Section), 0.5-1 µg/ml

 Immunocytochemistry, 0.5-1 µg/ml
Western blot, 0.1-0.5 µg/ml
Flow Cytometry, 1-3Î¼g/1x10⁶cells

Subcellular Localization
Isoform 1: Cell membrane; Single-pass type I membrane protein.

Tissue Specificity
Isoform 1 and isoform 2 are detected in spermatogonia and Leydig cells. Isoform 3 is detected in round spermatids, elongating spermatids and spermatozoa (at protein level). Widely expressed. Detected in the hematopoietic system, the gastrointestinal system, in melanocytes and in germ cells. .

Protein Name
Mast/stem cell growth factor receptor Kit

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
E.coli-derived human c-Kit recombinant protein (Position: Q26-S285). Human c-Kit shares 66% amino acid (aa) sequence identity with mouse c-Kit.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage **At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Sequence Similarities
Belongs to the protein kinase superfamily. Tyr protein kinase family. CSF-1/PDGF receptor subfamily.

Anti-KIT/SCFR Antibody - Protein Information

Name KIT

Synonyms SCFR

Function
Tyrosine-protein kinase that acts as a cell-surface receptor for the cytokine KITLG/SCF and plays an essential role in the regulation of cell survival and proliferation, hematopoiesis, stem cell maintenance, gametogenesis, mast cell development, migration and function, and in melanogenesis. In response to KITLG/SCF binding, KIT can activate several signaling pathways. Phosphorylates PIK3R1, PLCG1, SH2B2/APS and CBL. Activates the AKT1 signaling pathway by phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase. Activated KIT also transmits signals via GRB2 and activation of RAS, RAF1 and the MAP kinases MAPK1/ERK2 and/or MAPK3/ERK1. Promotes activation of STAT family members STAT1, STAT3, STAT5A and STAT5B. Activation of PLCG1 leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5- trisphosphate. KIT signaling is modulated by protein phosphatases, and by rapid internalization and degradation of the receptor. Activated KIT promotes phosphorylation of the protein phosphatases PTPN6/SHP-1 and PTPRU, and of the transcription factors STAT1, STAT3, STAT5A and STAT5B. Promotes phosphorylation of PIK3R1, CBL, CRK (isoform Crk-II), LYN, MAPK1/ERK2 and/or MAPK3/ERK1, PLCG1, SRC and SHC1.

Cellular Location
[Isoform 1]: Cell membrane; Single-pass type I membrane protein [Isoform 3]: Cytoplasm. Note=Detected in the cytoplasm of spermatozoa, especially in the equatorial and subacrosomal region of the sperm head.

Tissue Location
[Isoform 3]: In testis, detected in spermatogonia in the basal layer and in interstitial Leydig cells but not in Sertoli cells or spermatocytes inside the seminiferous tubules (at protein level) (PubMed:20601678). Expression is maintained in ejaculated spermatozoa (at protein level) (PubMed:20601678)

Anti-KIT/SCFR Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-KIT/SCFR Antibody - Images

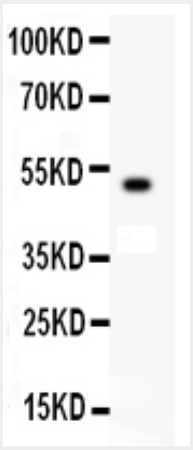

Figure 1. Western blot analysis of C-Kit using anti-C-Kit antibody (ABO11949). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours.Lane 1: Recombinan Human C-Kit Protein 0.5ng After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-C-Kit antigen affinity purified polyclonal antibody (Catalog # ABO11949) at 0.5 Î¼g/mL overnight at 4Â°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for C-Kit at approximately 49KD. The expected band size for C-Kit is at 49KD.

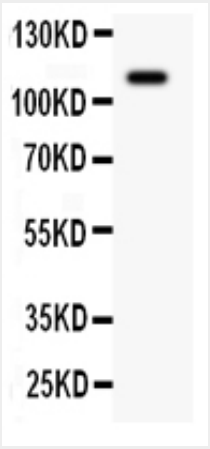

Figure 2. Western blot analysis of C-Kit using anti-C-Kit antibody (ABO11949). Electrophoresis was

performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours.Lane 1: HEPG2 Whole Cell Lysate After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-C-Kit antigen affinity purified polyclonal antibody (Catalog # ABO11949) at 0.5 Î¼g/mL overnight at 4Â°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for C-Kit at approximately 109KD. The expected band size for C-Kit is at 109KD.

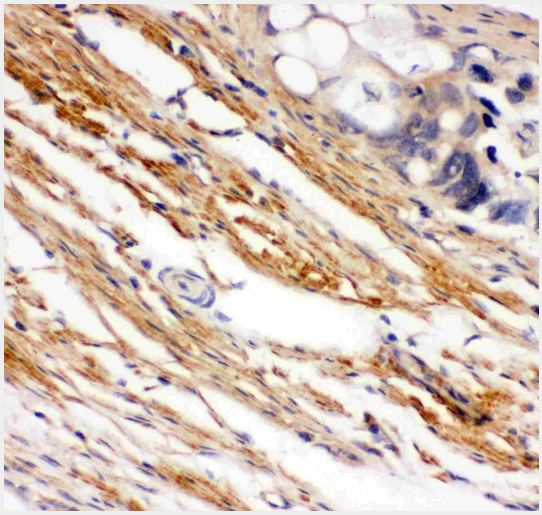

Figure 3. IHC analysis of C-Kit using anti-C-Kit antibody (ABO11949).C-Kit was detected in paraffin-embedded section of human intestinal cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1Î¼g/ml rabbit anti-C-Kit Antibody (ABO11949) overnight at 4Â°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37Â°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

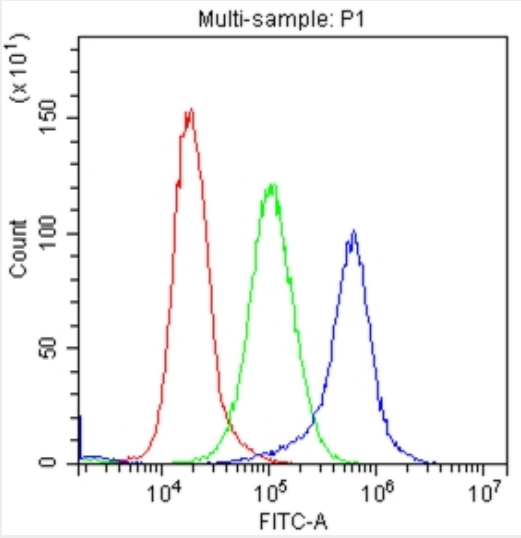

Figure 4. Flow Cytometry analysis of K562 cells using anti-C-Kit antibody (ABO11949).Overlay histogram showing K562 cells stained with ABO11949 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-C-Kit Antibody (ABO11949,1Î¼g/1x106 cells) for 30 min at 20Â°C. DyLight?488 conjugated goat anti-rabbit IgG (BA1127, 5-10Î¼g/1x106 cells) was used as secondary antibody for 30 minutes at 20Â°C. Isotype control antibody (Green

line) was rabbit IgG (1Î¼g/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Anti-KIT/SCFR Antibody - Background

SCFR(Mast/stem cell growth factor receptor), also known as KIT ONCOGENE or CD117, is a protein that in humans is encoded by the KIT gene. KIT was first described as the cellular homolog of the feline sarcoma viral oncogene v-kit. The KIT gene is mapped on 4q12. Kit was expressed on the surface of germ cells up to the pachytene stage. Signaling from the KIT receptor tyrosine kinase is essential for primordial germ cell growth both in vivo and in vitro. Determination of the KIT effectors acting in primordial germ cells has been hampered by the lack of effective methods to manipulate easily gene expression in these cells.