

Human KIT / c-KIT / CD117 Protein (Fc Tag)

Catalog Number: 11996-H02H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

C-Kit; CD117; PBT; SCFR

Protein Construction:

A DNA sequence encoding the extracellular domain of human KIT (P10721-2) (Met1-Thr516) was expressed with the Fc region of human IgG1 at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

Measured by its binding ability in a functional ELISA. Immobilized human KIT-Fc (Cat:11996-H02H) at 10 µg/ml (100 µl/well) can bind biotinylated mouse KITL-His (1-189) (Cat:50487-M08B). The EC_{50} of biotinylated mouse KITL-His (1-189) (Cat:50487-M08B) is 2.87-6.71 ng/ml.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Gln 26

Molecular Mass:

The recombinant human KIT/Fc comprises 729 amino acids and has a predicted molecular mass of 82 kDa. The apparent molecular mass of the protein is approximately 93-115 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

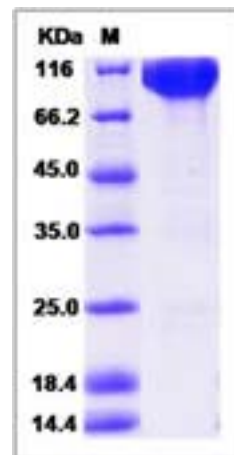
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

C-Kit is a type 3 transmembrane receptor for MGF (mast cell growth factor, also known as stem cell factor). c-Kit contains 5 Ig-like C2-type (immunoglobulin-like) domains and 1 protein kinase domain. It belongs to the protein kinase superfamily, tyr protein kinase family and CSF-1/PDGF receptor subfamily. C-Kit contains 5 Ig-like C2-type (immunoglobulin-like) domains and 1 protein kinase domain. C-Kit has a tyrosine-protein kinase activity. Binding of the ligands leads to the autophosphorylation of KIT and its association with substrates such as phosphatidylinositol 3-kinase. Antibodies to c-Kit are widely used in immunohistochemistry to help distinguish particular types of tumour in histological tissue sections. It is used primarily in the diagnosis of GISTs. In GISTs, c-Kit staining is typically cytoplasmic, with stronger accentuation along the cell membranes. C-Kit antibodies can also be used in the diagnosis of mast cell tumours and in distinguishing seminomas from embryonal carcinomas. Mutations in c-Kit gene are associated with gastrointestinal stromal tumors, mast cell disease, acute myelogenous leukemia, and piebaldism. Defects in KIT are a cause of acute myelogenous leukemia (AML). AML is a malignant disease in which hematopoietic precursors are arrested in an early stage of development. Note= Somatic mutations that lead to constitutive activation of KIT are detected in AML patients.

References

1. Andre C, *et al.* (1997) Sequence analysis of two genomic regions containing the KIT and the FMS receptor tyrosine kinase genes. *Genomics*. 39(2):216-26.
2. Yarden Y, *et al.* (1987) Human proto-oncogene c-kit: a new cell surface receptor tyrosine kinase for an unidentified ligand. *EMBO J*. 6(11):3341-51.
3. Leong KG, *et al.* (2008) Generation of a prostate from a single adult stem cell. *Nature*. 456(7223): 804-8.

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