Human c-KIT / CD117 Protein (ECD, His Tag)

Catalog Number: 11996-H08H

General Information

Gene Name Synonym:

C-Kit; CD117; PBT; SCFR

Protein Construction:

A DNA sequence encoding the human KIT isoform 2 (P10721-2) extracellular domain (Met 1-Thr 516) was expressed, with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: ≥ 97 % as determined by SDS-PAGE. ≥ 90 % as determined by SEC-HPLC.

Bio Activity:

Measured by its binding ability in a functional ELISA. Immobilized human KIT (Cat:11996-H08H) at 2 μg/mL (100 μl/well) can bind biotinylated Human KITL (Cat:10451-H08B), The EC_{50} of biotinylated Human KITL is 2.0-9.0 ng/mL.

Endotoxin:

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

Predicted N terminal: Gln 26

Molecular Mass:

The recombinant human KIT consists of 502 amino acids and predictes a molecular mass of 56.7 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rhKIT is approximately 86 kDa due to glycosylation.

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

Stability & Storage:
Samples are stable for twelve months from date of receipt at -20℃ to -80℃.

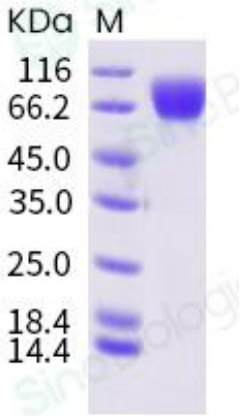
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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 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 tumor 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 tumors and in distinguishing seminomas from embryonal carcinomas. Mutations in the 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.