Human KIT / c-KIT / CD117 Protein (aa 540-972, His & GST Tag)

Catalog Number: **11996-H20B1**

Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

C-Kit; CD117; PBT; SCFR; Bs; c-KIT; CD117; Fdc; Gsfsco1; Gsfsco5; Gsfsow3; SCO1; SCO5; SOW3; Ssm; Tr-kit; W

Protein Construction:

A DNA sequence encoding the human KIT isoform 2 (P10721-2) cytoplasmic domain (Thr 540-Val 972) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 92 % as determined by SDS-PAGE

Bio Activity:

No Kinase Activity

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 ℃

Predicted N terminal: Gln 26

Molecular Mass:

The recombinant human KIT(aa 540-972) /GST chimera consists of 670 amino acids and predictes a molecular mass of 76.8 kDa. It migrates as an approximately 68 KDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 50mM Tris, 100mM NaCl, pH 8.0, 20% gly, 3mM DTT

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:

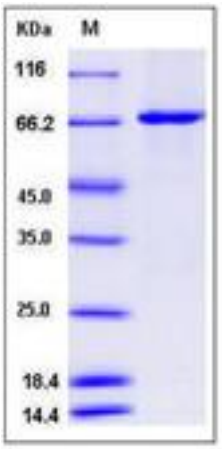
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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 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 lukemia, 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.