

Recombinant Human KIT Protein (Thr540-Val972), His-GST-tagged

Cat. No. KIT-537H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human KIT Protein isoform 2 (P10721-2) cytoplasmic domain (Thr540-Val972) was produced by Baculovirus-Insect Cells expression system. This protein was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus.
Species	Human
Source	Insect Cells
ProteinLength	Thr540-Val972
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, tyrosine 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

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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.

Predicted N Terminal	Gln 26
Form	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.
Molecular Mass	The recombinant human KIT(aa 540-972) /GST chimera consists of 670 amino acids and predicts a molecular mass of 76.8 kDa. It migrates as an approximately 68 KDa band in SDS-PAGE under reducing conditions.
Endotoxin	< 1.0 EU per µg of the protein as determined by the LAL method
Purity	> 92 % as determined by SDS-PAGE
Stability	Samples are stable for up to twelve months from date of receipt at -70 centigrade.
Storage	Store it under sterile conditions at -20 centigrade to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 mg/ml. Centrifuge the vial at 4°C before opening to recover the entire contents.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are

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shipped at ambient temperature.

Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

GENE INFORMATION

Gene Name	KIT v-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog [Homo sapiens]
Official Symbol	KIT
Synonyms	KIT; C Kit; CD117; SCFR; p145 c-kit; proto-oncogene c-Kit; PBT; C-Kit;
Gene ID	3815
mRNA Refseq	NM_000222
Protein Refseq	NP_000213
MIM	164920
UniProt ID	P10721

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