Data Sheet (Cat.No.TMPY-04051)

TargetMol

c-Kit/CD117 Protein, Human, Recombinant (hFc)

General Information

Synonyms:	SCFR;v-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog;PBT;CD117;C-Kit
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. Predicted N terminal: Gln 26
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P10721-2
Molecular Weight:	82 kDa (predicted); 93-115 kDa (reducing conditions)

QC Testing

Biological Activity:	Immobilized Human SCF His at 2 μg/ml (100 μl/well) can bind Human c-Kit hFc , the EC50 of Human c-Kit hFc is 20-60 ng/mL.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

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 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.Cancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy

Reference

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