Recombinant SCF protein (His tag)

Catalog Number	537613
Synonyms	Mast cell growth factor; MGF; Stem cell factor; SCF; c-Kit ligand; sKITLG
Species	Human
Expression System	E. coli
Accession	P21583
Molecular Weight	Predictes a molecular mass of 17.46 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 19 kDa band.

Product Information

Sequence Region	26-164
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 26-164 aa (P21583) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are 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.

Description

Description	This product is a recombinant human Kit ligand (KITLG) fragment (amino acids 26-164), representing a stable and soluble unit of the protein. Kit ligand, also known as stem cell factor (SCF) or mast cell growth factor, is a critical cytokine that regulates cell survival, proliferation, hematopoiesis, and stem cell maintenance. This fragment is ideal for structural studies, biochemical assays, and functional investigations in life science research. Kit ligand (KITLG) is a key ligand for the receptor-type protein-tyrosine kinase KIT, playing an essential role in cell survival, proliferation, hematopoiesis, stem cell maintenance, gametogenesis, mast cell development, migration, function, and melanogenesis. Upon binding to KIT, it activates multiple signaling pathways, including phosphorylation of PIK3R1 and activation of AKT1, transmission via GRB2 leading to RAS, RAF1, and MAPK activation, promotion of STAT family members (STAT1, STAT3, STAT5), and activation of PLCG1, resulting in diacylglycerol and inositol 1,4,5-trisphosphate production. It acts synergistically with other cytokines, such as interleukins. Subcellularly, full-length isoforms are located at the cell membrane as single-pass type I membrane proteins, with isoform 2 also found in the cytoplasm, cytoskeleton, lamellipodia, and filopodia, while the soluble KIT ligand (sKITLG) is secreted. The provided fragment (26-164) was selected computationally for stability and solubility, enabling detailed analysis of its functional properties.