# Recombinant KIT protein (His tag)

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| **Catalog Number** | 537503 |
| **Synonyms** | SCFR; Piebald trait protein; PBT; Proto-oncogene c-Kit; Tyrosine-protein kinase Kit; p145 c-kit; v-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog; CD antigen CD117 |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | P10721 |
| **Molecular Weight** | Predictes a molecular mass of 57.12 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 58 kDa band. |

## Product Information

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| **Sequence Region** | 33-524 |
| **Form** | Lyophilized powder |
| **Formulation** | Lyophilized from sterile PBS, pH 7.4 |
| **Purity** | >87%, 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 33-524 aa (P10721) were fused with 6His tag. |

## Storage & Handling

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

## Description

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| **Description** | Recombinant Human KIT Protein Fragment (33-524) is a high-purity, biologically active fragment encompassing the Ig-like C2-type domains 2-5 of the Mast/stem cell growth factor receptor Kit. This product is ideal for investigating receptor-ligand interactions, signal transduction mechanisms, and structural studies related to KIT's role in cell proliferation, survival, and hematopoiesis.<br>The full-length Mast/stem cell growth factor receptor Kit (KIT) is a tyrosine-protein kinase that functions as a cell-surface receptor for the cytokine KITLG/SCF. It plays an essential role in regulating cell survival, proliferation, hematopoiesis, stem cell maintenance, gametogenesis, mast cell development, migration, function, and melanogenesis. Upon KITLG/SCF binding, KIT activates multiple signaling pathways, including phosphorylation of PIK3R1, PLCG1, SH2B2/APS, and CBL, leading to activation of AKT1, RAS-RAF-MAPK, and STAT family members. KIT signaling is modulated by protein phosphatases and receptor internalization. Subcellular localization includes membrane association for isoforms 1 and 2, while isoform 3 is cytoplasmic, with detection in spermatozoa regions. The recombinant fragment (33-524) specifically covers key Ig-like C2-type domains involved in these functional interactions. |