Recombinant MERTK protein (His tag)

Catalog Number	540219
Synonyms	Proto-oncogene c-Mer; Receptor tyrosine kinase MerTK
Species	Human
Expression System	E. coli
Accession	Q12866
Molecular Weight	Predictes a molecular mass of 46.55 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 47 kDa band.

Product Information

Sequence Region	94-505
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 94-505 aa (Q12866) 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 recombinant protein product features a 412-amino acid fragment (residues 94-505) of human Tyrosine-protein kinase Mer (MERTK), encompassing the Ig-like C2-type 2 and Fibronectin type-III domains. It is an essential tool for investigating domain-specific functions in signal transduction, phagocytosis, and immune regulation. Tyrosine-protein kinase Mer (MERTK) is a receptor tyrosine kinase that transduces extracellular signals to regulate critical cellular processes, including cell survival, migration, differentiation, and phagocytosis of apoptotic cells (efferocytosis). Upon ligand binding (e.g., GAS6), MERTK undergoes autophosphorylation, initiating downstream signaling through interactions with proteins like GRB2 and PLCG2, leading to phosphorylation of MAPK1, FAK/PTK2, or RAC1. It plays a vital role in retinal pigment epithelium function by phagocytosing rod outer segments and inhibits Toll-like receptor-mediated innate immune responses via STAT1 activation and induction of SOCS1 and SOCS3. MERTK is localized to the cell membrane as a single-pass type I membrane protein, facilitating its role in ligand recognition and intracellular signaling cascades.