



Recombinant Protein Technical Manual

Recombinant Human MERTK/MER Protein (His&GST Tag)

RPES3061

Product Data:

Product SKU: RPES3061

Size: 20µg

Species: Human

Expression host: Baculovirus-Insect Cells

Uniprot: Q12866

Protein Information:

Molecular Mass: 62 kDa

AP Molecular Mass: 50 kDa

Tag: N-His&GST

Bio-activity:

Purity: > 92 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.

Shipping: This product is provided as liquid. It is shipped at frozen temperature with blue ice/gel packs. Upon receipt, store it immediately at < -20°C.

Formulation: Supplied as sterile 50mM Tris, 100mM NaCl, pH 7.4, 20% gly, 0.3mM DTT

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: Tyrosine-protein kinase Mer; Proto-oncogene c-Mer; Receptor tyrosine kinase MerTK; MERTK; MER; Mer

Immunogen Information:

Sequence: Glu 578-Tyr 872

Background:

Proto-oncogene tyrosine-protein kinase MER (MERTK) is a member of the MER/AXL/TYRO3 receptor kinase family and encodes a transmembrane protein with two fibronectin type-III domains, two Ig-like C2-type (immunoglobulin-like) domains, and one tyrosine kinase domain. MERTK is localized in membrane and is not expressed in normal B- and T-lymphocytes but is expressed in numerous neoplastic B- and T-cell lines. This protein is highly expressed in testis, ovary, prostate, lung, and kidney, with lower expression in spleen, small intestine, colon, and liver. MERTK regulates many physiological processes including cell survival, migration, differentiation, and phagocytosis of apoptotic cells (efferocytosis). Ligand binding at the cell surface induces autophosphorylation of MERTK on its intracellular domain that provides docking sites for downstream signaling molecules. MERTK signaling plays a role in various processes such as macrophage clearance of apoptotic cells, platelet aggregation, cytoskeleton reorganization and engulfment. MERTK plays also an important role in inhibition of Toll-like receptors (TLRs)-mediated innate immune response by activating STAT1, which selectively induces production of suppressors of cytokine signaling SOCS1 and SOCS3. Defects in MERTK are the cause of retinitis pigmentosa type 38.