

## MERTK Protein, Human (HEK293, His)

<b>Cat. No.:</b>	HY-P700442
<b>Synonyms:</b>	MERTK; c-mer proto-oncogene tyrosine kinase; tyrosine-protein kinase Mer; mer; RP38; STK kinase; proto-oncogene c-Mer; MER receptor tyrosine kinase; receptor tyrosine kinase MerTK; MER; c-mer; MGC133349;
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	Q12866 (A21-I505)
<b>Gene ID:</b>	10461
<b>Molecular Weight:</b>	55.4 kDa

### PROPERTIES

<b>AA Sequence</b>	<pre> A I T E A R E E A K   P Y P L F P G P F P   G S L Q T D H T P L   L S L P H A S G Y Q P A L M F S P T Q P   G R P H T G N V A I   P Q V T S V E S K P   L P P L A F K H T V G H I I L S E H K G   V K F N C S I S V P   N I Y Q D T T I S W   W K D G K E L L G A H H A I T Q F Y P D   D E V T A I I A S F   S I T S V Q R S D N   G S Y I C K M K I N N E E I V S D P I Y   I E V Q G L P H F T   K Q P E S M N V T R   N T A F N L T C Q A V G P P E P V N I F   W V Q N S S R V N E   Q P E K S P S V L T   V P G L T E M A V F S C E A H N D K G L   T V S K G V Q I N I   K A I P S P P T E V   S I R N S T A H S I L I S W V P G F D G   Y S P F R N C S I Q   V K E A D P L S N G   S V M I F N T S A L P H L Y Q I K Q L Q   A L A N Y S I G V S   C M N E I G W S A V   S P W I L A S T T E G A P S V A P L N V   T V F L N E S S D N   V D I R W M K P P T   K Q Q D G E L V G Y R I S H V W Q S A G   I S K E L L E E V G   Q N G S R A R I S V   Q V H N A T C T V R I A A V T R G G V G   P F S D P V K I F I   P A H G W V D Y A P   S S T P A P G N A D P V L I I           </pre>
<b>Biological Activity</b>	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of 20 mM Tris-HCl, 0.5 M NaCl, 0.2 M Arg, 6% Trehalose, pH 8.0
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

## DESCRIPTION

### Background

The Mer protein, a receptor tyrosine kinase, transduces signals from the extracellular matrix by binding to various ligands, including LGALS3, TUB, TULP1, or GAS6. It is involved in regulating diverse physiological processes, including cell survival, migration, differentiation, and the phagocytosis of apoptotic cells (efferocytosis). Ligand binding at the cell surface induces autophosphorylation of MERTK on its intracellular domain, creating docking sites for downstream signaling molecules. Upon activation by ligand, Mer interacts with GRB2 or PLCG2 and induces the phosphorylation of MAPK1, MAPK2, FAK/PTK2, or RAC1. MERTK signaling is implicated in macrophage clearance of apoptotic cells, platelet aggregation, cytoskeleton reorganization, and engulfment. In the retinal pigment epithelium (RPE), it serves as a regulator of rod outer segment fragments' phagocytosis. Moreover, Mer plays a crucial role in inhibiting Toll-like receptors (TLRs)-mediated innate immune responses by activating STAT1, which selectively induces the production of suppressors of cytokine signaling SOCS1 and SOCS3.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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