

MERTK Protein, Rat (HEK293, His)

Cat. No.:	HY-P700594
Synonyms:	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;
Species:	Rat
Source:	HEK293
Accession:	P57097 (G19-M497)
Gene ID:	65037
Molecular Weight:	55.5 kDa

PROPERTIES

AA Sequence

G G T A E K E E E I	K P D Q P F S G P L	P G S L P A D H R P	F F A P H S S G D Q
L S P S Q T G R S H	P A H T A T P Q M T	S A A S N L L P P V	A F K N T I G R I V
L S E H K S V K F N	C S I N I P N V Y Q	E T A G I S W W K D	G K E L L G A H H S
I T Q F Y P D E E G	V S I I A L F S I T	S V Q R S D N G S Y	I C K M K V N D R E
V V S D P I Y V E V	Q G L P Y F T K Q P	E S V 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 N P E	R S P S V L T V A G	L T E T A V F S C E
A H N D K G L T V S	K G V Q I N I K V I	P S P P T E V H I L	N S T A H S I L V S
W V P G F D G Y S P	L Q N C S I Q V K E	A D Q L S N G S V M	V F N T S A S P H L
Y E V Q Q L Q A L A	N Y S V T V S C R N	E I G W S A V S P W	I L A S T T E G A P
A V A P L N I T V F	L N E S S N N L E I	R W T K P P I K R Q	D G E L V G Y R I S
H V W E S A G T S K	E L S E E V S Q N G	S W A Q V P V Q M H	N A T C T V R I A V
I T K G G I G P F S	E P V D V A I P E H	S R V D Y A P S S T	P A P G N T E S M

Biological Activity The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.

Appearance Lyophilized powder.

Formulation Lyophilized from a 0.2 μ m filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.

Endotoxin Level <1 EU/ μ g, determined by LAL method.

Reconstitution It is not recommended to reconstitute to a concentration less than 100 μ g/mL in ddH₂O.

Storage & Stability 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.

Shipping Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

MERTK Protein is a receptor tyrosine kinase that facilitates the transmission of signals from the extracellular matrix to the cytoplasm by binding to various ligands, including LGALS3, TUB, TULP1, or GAS6. This protein governs crucial physiological processes such as cell survival, migration, differentiation, and the engulfment of apoptotic cells (efferocytosis). Upon ligand binding, autophosphorylation of MERTK occurs on its intracellular domain, creating docking sites for downstream signaling molecules. Subsequently, MERTK interacts with GRB2 or PLCG2, leading to the phosphorylation of MAPK1, MAPK2, FAK/PTK2, or RAC1. Consequently, MERTK signaling contributes to diverse processes, including macrophage clearance of apoptotic cells, platelet aggregation, cytoskeleton reorganization, and engulfment. Within the retinal pigment epithelium (RPE), MERTK serves as a regulator of phagocytosis of rod outer segment fragments. Furthermore, it plays a vital role in suppressing the innate immune response triggered by Toll-like receptors (TLRs) by activating STAT1, which selectively promotes 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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