

## Recombinant Human MAPKAPK5 Protein (His & GST Tag)

Catalog No. PKSH030328

*Note:* Centrifuge before opening to ensure complete recovery of vial contents.

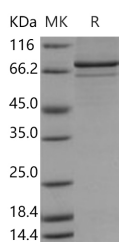
### Description

<b>Synonyms</b>	MAPKAP-K5;MK-5;MK5;PRAK
<b>Species</b>	Human
<b>Expression Host</b>	Baculovirus-Insect Cells
<b>Sequence</b>	Met 1-Gln 471
<b>Accession</b>	NP_003659.2
<b>Calculated Molecular Weight</b>	82.0 kDa
<b>Observed molecular weight</b>	75 kDa
<b>Tag</b>	N-His-GST
<b>Bioactivity</b>	Not validated for activity

### Properties

<b>Purity</b>	> 76 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.
<b>Shipping</b>	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.
<b>Formulation</b>	Supplied as sterile solution of 20mM Tris, 500mM NaCl, pH 8.0, 10% glycerol
<b>Reconstitution</b>	Not Applicable

### Data



> 76 % as determined by reducing SDS-PAGE.

### Background

MAPKAPK5 contains 1 protein kinase domain and belongs to the protein kinase superfamily, CAMK Ser/Thr protein kinase family. MAPKAPK5 has significant sequence homology to mitogen-activated protein kinase (MAPK)-activated protein kinase (MAPKAPK). It is widely distributed. MAPKAPK5 can be phosphorylated by extracellular-regulated kinase (ERK), and p38 kinase but not by c-jun N-terminal kinase (JNK) in vitro. Recombinant GST-MAPKAPK5 protein can phosphorylate a peptide derived from the regulatory light chain of myosin II. Phosphorylation of MAPKAPK5 by ERK and p38 kinase increased its activity by 9 and 15 fold respectively. Taken together, these data suggest that

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MAPKAPK5 is a novel in vitro substrate for ERK and p38 kinase. In response to cellular stress and proinflammatory cytokines, this kinase is activated through its phosphorylation by MAP kinases including MAPK1/ERK, MAPK14/p38-alpha, and MAPK11/p38-beta. MAPKAPK5 also mediates stress-induced small heat shock protein 27 phosphorylation.

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