

MAPKAPK3 Protein, Human, Recombinant (GST)

General Information

Synonyms:	mitogen-activated protein kinase-activated protein kinase 3;3PK;MAPKAP3;MAPKAPK-3; MAPKAP-K3;MK-3
Protein Construction:	A DNA sequence encoding the full length of human MAPKAPK3 (NP_004626.1) (Met 1-Gln 382) was expressed with the GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	Q16644
Molecular Weight:	69 kDa (predicted); 69 kDa (reducing conditions)

QC Testing

Biological Activity:	Kinase activity untested
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Supplied as sterile 50 mM Tris, 100 mM NaCl, pH 7.5, 0.25 mM DTT, 0.1 mM EDTA, 0.5 mM PMSF, 10% glycerol.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store the product under sterile conditions at -20°C to -80°C. Samples are stable for up to 12 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein Background

The MAPKAP kinases are a group of MAP kinase substrates that are themselves kinases. In response to activation, the MAP kinases phosphorylate downstream components on a consensus Pro-X-Ser/Thr-Pro motif. Several kinases that contain this motif have been identified and serve as substrates for the ERK and p38 MAP kinases. Mitogen-activated protein (MAP) kinase-activated protein kinase 3, also known as MAPKAPK-3 and 3pK, is a member of the Ser/Thr protein kinase family. It is widely expressed in human tissues, with a higher expression level observed in the heart and skeletal muscle. No expression in the brain. MAPKAPK-3 is unique since it was shown to be activated by three members of the MAPK family, namely extracellular-signal-regulated kinase (ERK), p38, and Jun-N-terminal kinase (JNK). It is highly activated both by mitogens and by stress-inducing agents or proinflammatory

cytokines and translocates to the cytoplasm from the nucleus. MAPKAPK-3 is exclusively activated via the classical MAPK cascade, while stress-induced activation of MAPKAPK-3 is mainly mediated by p38, however, the mechanism defining the specificity remains unknown.

Reference

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Neufeld, B. et al., 2000, J. Biol. Chem. 275: 20239-20242.

Zakowski, V. et al., 2004, Exp Cell Res. 299: 101-109.

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