Recombinant Protein Technical Manual

Recombinant Human MAPKAPK5 Protein (His & GST Tag)

RPES0778

Product Data:

Product SKU: RPES0778

Size: 20µg

Species: Human

Expression host: Baculovirus-Insect Cells

Uniprot: NP_003659.2

Protein Information:

Molecular Mass: 82 kDa

AP Molecular Mass: 75 kDa

Tag: N-His & GST

Bio-activity:

Purity: > 76 % 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 20mM Tris, 500mM NaCl, pH 8.0, 10% glycerol

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

Application:

Synonyms: MAPKAP-K5;MK-5;MK5;PRAK

Immunogen Information:

Sequence: Met 1-Gln 471

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 MAPKAPK5 is a novelin vitrosubstrate 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.