

MEK1 Protein, Mouse (sf9, His-GST)

Cat. No.:	HY-P73825
Synonyms:	Dual specificity mitogen-activated protein kinase kinase 1; MAPKK 1; MEK 1; Map2k1
Species:	Mouse
Source:	Sf9 insect cells
Accession:	P31938 (M1-I393)
Gene ID:	26395
Molecular Weight:	Approximately 65 kDa

PROPERTIES

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 µm filtered solution of 20 mM Tris, 500 mM NaCl, 10% Glycerol, pH 8.0. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
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

MEK1 protein, a pivotal component of the MAP kinase signal transduction pathway, plays a crucial role in transducing extracellular signals into intracellular responses. Upon binding of ligands such as growth factors and cytokines to their cell-surface receptors, MEK1 is activated as part of the RAS-RAF1-MEK1/2-MAPK/ERK cascade. MEK1, along with MAP2K2/MEK2, catalyzes the dual phosphorylation of threonine and tyrosine residues in the activation loop of ERK1 and ERK2, thereby initiating downstream signaling events. This cascade regulates diverse biological functions, including cell growth, adhesion, survival, and differentiation. In addition to its role in the transcriptional and cytoskeletal regulation, the MAPK/ERK pathway impacts peroxisome proliferator-activated receptor gamma (PPARG), contributing to cellular processes such as differentiation and apoptosis. Furthermore, MEK1's involvement in endosomal dynamics and Golgi apparatus fragmentation during mitosis underscores its versatility in coordinating intricate cellular responses.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA