ERK2/MAPK1, active human recombinant, expressed in E.coli, untagged

Lot Nr. 645674/008

Material for in vitro research use only. Not for pharmaceutical or drug application. Material does not contain any animal products such as albumin.

1. Description

Extracellular signal-regulated kinase (ERK) is a serine/threonine protein kinase that functions as the major effector of the Ras protein, a small GTPase. The so called “ERK cascade” consists of three enzymes, the initial GTPase-regulated kinase Raf, (MAP3K) that phosphorylates and activates an intermediate kinase MEK (MAP2K) that, in turn, phosphorylates a threonine and a tyrosine residue of the activation loop of the effector kinase ERK (MAPK). Both, ERK1 and ERK2 share a high sequence identity (90%) and are co-expressed in most tissues but differ in their relative abundance. The substrate specificities of the ERK1 and ERK2 protein kinases are very similar. The consensus sequence for ERK1 substrates has been identified as -Pro-Leu-Ser/Thr-Pro. Both kinases are involved in proliferation, differentiation, cell cycle processes, and survival. ERK1/2 differentially phosphorylates a variety of nuclear (Elk-1, c-Myc), cytosolic (MNK1/2, Raf) and cytoskeletal (MAP2, Tau) targets. Since the ERK pathway is often up-regulated in human tumors and it represents an attractive target for anticancer drugs development.


1. Product Information

Theoretical Mw: 41.76 kDa
Expression system: E.coli
Purification: Affinity purification using GSH-agarose followed by cleavage of GST-tag
Storage buffer: 50 mM Hepes, pH 7.50; 100 mM NaCl, 5 mM DTT, 20% glycerol
Storage temperature: -80°C (avoid repeated freeze-thaw cycles!)
Shipping conditions: Dry ice
Protein concentration: 0.326 mg/ml (Bradford method using BSA as standard protein)
Method for determination of Km value & specific activity: Filter binding assay MSFC membrane
Specific activity: 386.000 pmol/mg x min
Coomassie stain:

![Coomassie stain image](image)

**Product specific literature references**


