

Recombinant Human Mitogen-Activated Protein Kinase 7, GST-Tagged

Cat. No. MAPK7-1050H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant full-length human ERK5 was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag.
Species	Human
Source	Sf9 Cells
Description	ERK5 is a member of the MAP kinase family and is involved in a wide variety of cellular processes such as proliferation, differentiation, transcription regulation and development. ERK5 is activated by mitogen-activated protein kinase kinase 5 (MAP2K5/MEK5) and is involved in downstream signaling processes of various receptors. In response to extracellular signals, ERK5 translocates to cell nucleus where it regulates gene expression by phosphorylating and activating different transcription factors. Gene deletion of ERK5 in mice results in defective blood vessel and cardiac development leading to embryonic lethality. ERK5 has been shown to be critical for endothelial function and maintenance of blood vessel integrity.
Applications	Kinase Assay, Western Blot
Molecular Weight	132 kDa
Expression System	Sf9 insect cells using baculovirus.
Form	Recombinant protein stored in 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 10 mM

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	glutathione, 0.25 mM DTT, 0.1 mM EDTA, 0.1 mM PMSF, 25% glycerol.
Specific Activity	11 nmol/min/mg
Purity	> 75 %
Concentration	0.1 ug/ul
Sequences	Full-length
Storage	Store product at -70oC. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.
Pathways	Activated TLR4 signalling; EGFR1 Signaling Pathway; ERK/MAPK targets; ERKs are inactivated; ErbB1 downstream signaling; Focal Adhesion; Gap junction; GnRH signaling pathway; IL-3 Signaling Pathway; Innate Immunity Signaling; Insulin Signaling; Integrin-mediated cell adhesion; MAP kinase activation in TLR cascade; MAPK signaling pathway; MicroRNAs in cardiomyocyte hypertrophy
GENE INFORMATION	
Gene Name	MAPK7 mitogen-activated protein kinase 7 [Homo sapiens]
Official Symbol	MAPK7
Synonyms	MAPK7; BMK1; ERK4; ERK5; PRKM7; ERK-5; BMK1 kinase; MAP kinase 7; big MAP kinase 1 extracellular signal-regulated kinase 5; extracellular-signal-regulated kinase 5; BMK-1mitogen-activated protein kinase 7; OTTHUMP00000065906; OTTHUMP00000065907; EC=2.7.11.24

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Gene ID	5598
mRNA Refseq	NM_139032
Protein Refseq	NP_620601
MIM	602521
UniProt ID	Q13164
Chromosome Location	17p11.2
Function	ATP binding; MAP kinase activity; nucleotide binding; protein binding; protein serine/threonine kinase activity

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