

MAPK3 recombinant protein

Recombinant MAPK3 (ERK1) protein

CATALOG # AAA60166	HOST Baculovirus
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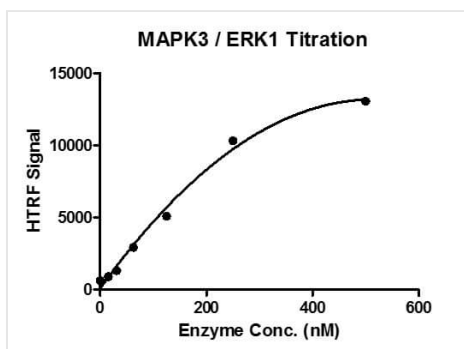
PRODUCT SYNONYMS

MAPK3; Recombinant MAPK3 (ERK1) protein; Mitogen-Activated Protein Kinase 3; P44-MAPK; PRKM3; ERK-1; MAPK3 recombinant protein

PRODUCT SPECIFICATIONS

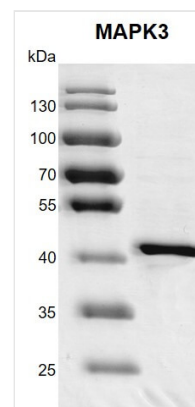
Host	Baculovirus
Form/Format	Recombinant MAPK3/ERK1 protein is supplied in 25mM HEPES-NaOH pH7.5, 300mM NaCl, 10% glycerol, 0.04% Triton X-100, and 0.5mM TCEP.
Protein Species	Human
Tag	DYKDDDDK-Tag
Notes	This product was manufactured as described in Protein Details. Where possible, We has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data for a given product is shown on the lot-specific Technical Data Sheet.
Dry Ice Note	The product may be shipped with dry ice, and an additional fee may be added to your shipping cost.
Preparation and Storage	Recombinant proteins in solution are temperature sensitive and must be stored at -80 degree C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. Shipping Temp: Dry Ice

IMAGES



Application Data

HTRF assay for MAPK3 (ERK1) protein activity 1 uM STK S1 substrate was incubated with different concentrations MAPK3 (ERK1) protein in a 10 ul reaction system containing 1xEnzymatic Buffer, 5 mM MgCl₂, 1 mM DTT, 5 nM SEB and 100 uM ATP for 1 hr. The 10 ul detection reagents containing STK antibody and SA-XL665 (each of which was 1:100 diluted with 1x Detection Buffer) were added and incubated with the reactions for 30 min. All the operations and reactions were performed at room temperature. HTRF KinEASE STK assay was used to detect the enzymatic activity.



SDS-PAGE

Recombinant MAPK3 (ERK1) protein gel 10% SDS-PAGE Coomassie staining MW: 44.4 kDa Purity: >95%

ADDITIONAL INFORMATION

Related Product Information for MAPK3 recombinant protein	Short Description: Recombinant MAPK3 (ERK1) protein was expressed in a baculovirus expression system as the full-length protein (accession number NP_002737.2) with an N-terminal DYKDDDDK-Tag. The molecular weight of the protein is 44.4 kDa. It is suitable for use in the study of enzyme kinetics, inhibitor screening, and selectivity profiling. Background: MAPK3 (Mitogen-Activated Protein Kinase 3), also known as ERK1, is a member of the MAP kinase family. MAPK1/ERK2 and MAPK3/ERK1 are the 2 MAPKs which play an important role in the MAPK/ERK cascade. They participate in a signaling cascade initiated by activated KIT and KITLG/SCF. Depending on the cellular context, the MAPK/ERK cascade mediates diverse biological functions such as cell growth, adhesion, survival and differentiation through the regulation of transcription, translation, cytoskeletal rearrangements. The MAPK/ERK cascade plays also a role in initiation and regulation of meiosis, mitosis, and postmitotic functions in differentiated cells by phosphorylating a number of transcription factors. About 160 substrates have already been discovered for ERKs. Many of these substrates are localized in the nucleus, and seem to participate in the regulation of transcription upon stimulation. However, other substrates are found in the cytosol as well as in other cellular organelles, and those are responsible for processes such as translation, mitosis and apoptosis. Moreover, the MAPK/ERK cascade is also involved in the regulation of the endosomal dynamics, including lysosome processing and endosome cycling through the perinuclear recycling compartment (PNRC); as well as in the fragmentation of the Golgi apparatus during mitosis.
Product Categories/Family for MAPK3 recombinant protein	Recombinant Proteins ; Kinase

NCBI AND UNIPROT INFORMATION

NCBI GI #	91718899
NCBI GeneID	5595
NCBI Accession #	NP_002737.2
NCBI GenBank Nucleotide #	NM_002746.2
UniProt Accession #	P27361; Q8NHX1; A8CZ58; B0LPG3
Molecular Weight	40,088 Da
NCBI Official Full Name	mitogen-activated protein kinase 3 isoform 1
NCBI Official Synonym Full Names	mitogen-activated protein kinase 3
NCBI Official Symbol	MAPK3
NCBI Official Synonym Symbols	ERK1; ERT2; ERK-1; PRKM3; P44ERK1; P44MAPK; HS44KDAP; HUMKER1A; p44-ERK1; p44-MAPK
NCBI Protein Information	mitogen-activated protein kinase 3
UniProt Protein Name	Mitogen-activated protein kinase 3
UniProt Gene Name	MAPK3
UniProt Synonym Gene Names	ERK1; PRKM3; MAP kinase 3; MAPK 3; ERK-1; p44-MAPK
UniProt Entry Name	MK03_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.