Datasheet for ABIN5709905

ERK1 Protein (AA 11-379, partial) (His tag)

1 Image

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Overview

Quantity:	100 µg
Target:	ERK1 (MAPK3)
Protein Characteristics:	AA 11-379, partial
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Purification tag / Conjugate:	This ERK1 protein is labelled with His tag.
Application:	SDS-PAGE (SDS)

Product Details

Sequence:	GGEPRRTEGV GPGVPGEVEM VKGQPFDVGP RYTQLQYIGE GAYGMVSSAY DHVRKTRVAI KKISPFEHQT YCQRTLREIQ ILLRFRHENV IGIRDILRAS TLEAMRDVYI VQDLMETDLY KLLKSQQLSN DHICYFLYQI LRGLKYIHSA NVLHRDLKPS NLLINTTCDL KICDFGLARI ADPEHDHTGF LTEYVATRWY RAPEIMLNSK GYTKSIDIWS VGCILAEMLS NRPIFPGKHY LDQLNHILGI LGSPSQEDLN CIINMKARNY LQSLPSKTKV AWAKLFPKSD SKALDLLDRM LTFNPNKRIT VEEALAHPYL EQYYDPTDEP VAEEPFTFAM ELDDLPKERL KELIFQETAR FQPGVLEAP
Purification:	SDS-PAGE
Purity:	> 90 %

Target Details

Target:	ERK1 (MAPK3)
Alternative Name:	MK03 (MAPK3 Products)
Background:	Serine/threonine kinase which acts as an essential component of the MAP kinase signal transduction pathway. MAPK1/ERK2 and MAPK3/ERK1 are the 2 MAPKs which play an important role in the MAPK/ERK cascade. They participate also 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 rearrangents. 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 se 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. The substrates include transcription factors (such as ATF2, BCL6, ELK1, ERF, FOS, HSF4 or SPZ1), cytoskeletal elents (such as CANX, CTTN, GJA1, MAP2, MAPT, PXN, SORBS3 or STMN1), regulators of apoptosis (such as BAD, BTG2, CASP9, DAPK1, IER3, MCL1 or PPARG), regulators of translation (such as EIF4EBP1) and a variety of other signaling-related molecules (like ARHGEF2, FRS2 or GRB10). Protein kinases (such as RAF1, RPS6KA1/RSK1, RPS6KA3/RSK2, RPS6KA2/RSK3, RPS6KA6/RSK4, SYK, MKNK1/MNK1, MKNK2/MNK2, RPS6KA5/MSK1, RPS6KA4/MSK2, MAPKAPK3 or MAPKAPK5) and phosphatases (such as DUSP1, DUSP4, DUSP6 or DUSP16) are other substrates which enable the propagation the MAPK/ERK signal to additional cytosolic and nuclear targets, thereby extending the specificity of the cascade.
Molecular Weight:	46.4 kDa
UniProt:	P27361
Pathways:	MAPK Signaling, RTK Signaling, Interferon-gamma Pathway, Fc-epsilon Receptor Signaling Pathway, Neurotrophin Signaling Pathway, Response to Growth Hormone Stimulus, Activation of Innate immune Response, Cellular Response to Molecule of Bacterial Origin, Hepatitis C, Protein targeting to Nucleus, Toll-Like Receptors Cascades, Signaling Events mediated by VEGFR1 and VEGFR2, Signaling of Hepatocyte Growth Factor Receptor, VEGFR1 Specific Signals, S100 Proteins

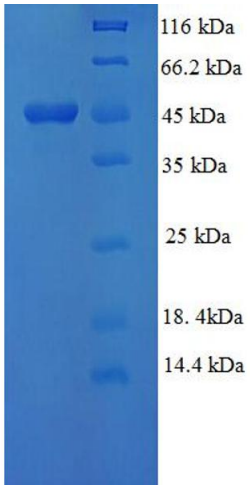
Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	0.1-2 mg/mL
Buffer:	20 mM Tris-HCl based buffer, pH 8.0
Storage:	-80 °C,4 °C,-20 °C
Storage Comment:	Store at -20°C, for extended storage, conserve at -20°C or -80°C. Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.

Images



SDS-PAGE

Image 1.