

Recombinant human MK-3 protein ab60308

4 图像

描述

产品名称	重组人MK-3蛋白
纯度	> 90 % Densitometry. Affinity purified.
表达系统	Baculovirus infected Sf9 cells
蛋白长度	Full length protein
无动物成分	No
性质	Recombinant
种属	Human

技术指标

Our **Abpromise guarantee** covers the use of **ab60308** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

应用	Functional Studies SDS-PAGE
形式	Liquid
补充说明	ab204861 (Hsp27 peptide) can be utilized as a substrate for assessing kinase activity

制备和贮存

稳定性和存储	Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles. pH: 7.50 Constituents: 0.0038% EGTA, 0.00174% PMSF, 0.00385% DTT, 0.79% Tris HCl, 0.00292% EDTA, 25% Glycerol (glycerin, glycerine), 0.87% Sodium chloride This product is an active protein and may elicit a biological response in vivo, handle with caution.
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常规信息

功能	Stress-activated serine/threonine-protein kinase involved in cytokines production, endocytosis, cell migration, chromatin remodeling and transcriptional regulation. Following stress, it is
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phosphorylated and activated by MAP kinase p38-alpha/MAPK14, leading to phosphorylation of substrates. Phosphorylates serine in the peptide sequence, Hyd-X-R-X(2)-S, where Hyd is a large hydrophobic residue. MAPKAPK2 and MAPKAPK3, share the same function and substrate specificity, but MAPKAPK3 kinase activity and level in protein expression are lower compared to MAPKAPK2. Phosphorylates HSP27/HSPB1, KRT18, KRT20, RCSD1, RPS6KA3, TAB3 and TTP/ZFP36. Mediates phosphorylation of HSP27/HSPB1 in response to stress, leading to dissociate HSP27/HSPB1 from large small heat-shock protein (sHsps) oligomers and impair their chaperone activities and ability to protect against oxidative stress effectively. Involved in inflammatory response by regulating tumor necrosis factor (TNF) and IL6 production post-transcriptionally: acts by phosphorylating AU-rich elements (AREs)-binding proteins, such as TTP/ZFP36, leading to regulate the stability and translation of TNF and IL6 mRNAs. Phosphorylation of TTP/ZFP36, a major post-transcriptional regulator of TNF, promotes its binding to 14-3-3 proteins and reduces its ARE mRNA affinity leading to inhibition of dependent degradation of ARE-containing transcript. Involved in toll-like receptor signaling pathway (TLR) in dendritic cells: required for acute TLR-induced macropinocytosis by phosphorylating and activating RPS6KA3. Also acts as a modulator of Polycomb-mediated repression.

组织特异性

Widely expressed, with a higher expression level observed in heart and skeletal muscle. No expression in brain.

序列相似性

Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. Contains 1 protein kinase domain.

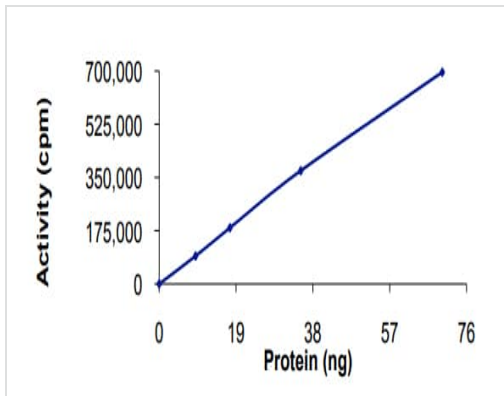
翻译后修饰

Phosphorylated and activated by MAPK1/ERK2 and MAPK3/ERK1. Phosphorylated and activated by MAP kinase p38-alpha/MAPK14 at Thr-201, Ser-251 and Thr-313.

细胞定位

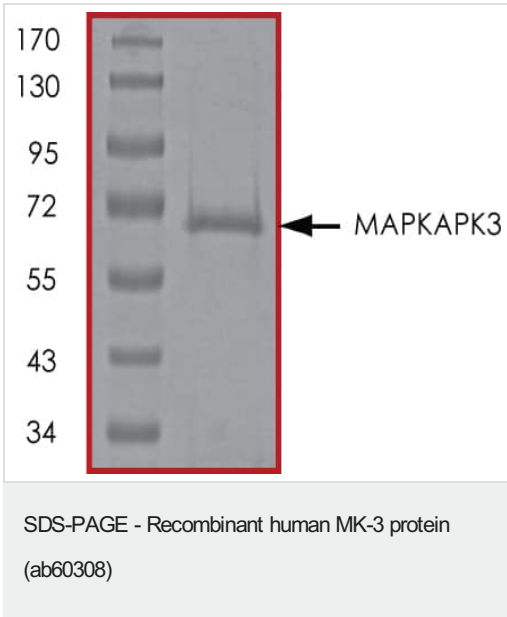
Nucleus. Cytoplasm. Predominantly located in the nucleus, when activated it translocates to the cytoplasm.

图片

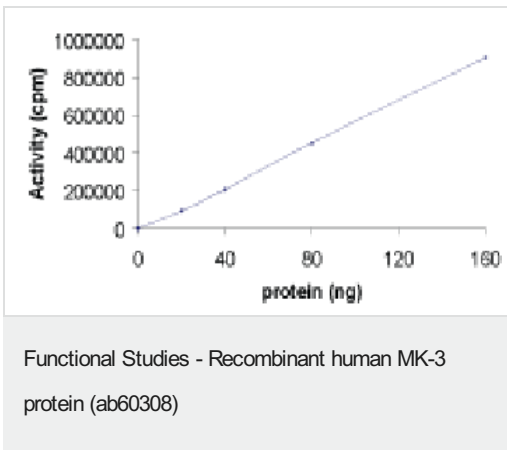


The specific activity of MK-3 (ab60308) was determined to be 553 nmol/min/mg as per activity assay protocol

Functional Studies - Recombinant human MK-3 protein (ab60308)



SDS PAGE analysis of ab60308



Sample Kinase Activity Plot.



ab60308 on SDS-PAGE.

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