

# Recombinant Human MK-3 protein ab45155

1 Image

### Description

<b>Product name</b>	Recombinant Human MK-3 protein
<b>Purity</b>	> 90 % Densitometry. Purified via GST Tag
<b>Expression system</b>	Escherichia coli
<b>Protein length</b>	Full length protein
<b>Animal free</b>	No
<b>Nature</b>	Recombinant
<b>Species</b>	Human

### Specifications

Our **Abpromise guarantee** covers the use of **ab45155** in the following tested applications.

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

<b>Form</b>	Liquid
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### Preparation and Storage

<b>Stability and Storage</b>	Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles. pH: 7.50 Constituents: 0.0418% EGTA, 0.00174% PMSF, 0.385% DTT, 0.79% Tris HCl, 0.00292% EDTA, 25% Glycerol (glycerin, glycerine), 0.87% Sodium chloride
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### General Info

<b>Function</b>	Stress-activated serine/threonine-protein kinase involved in cytokines production, endocytosis, cell migration, chromatin remodeling and transcriptional regulation. Following stress, it is 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
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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.

#### Tissue specificity

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

#### Sequence similarities

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

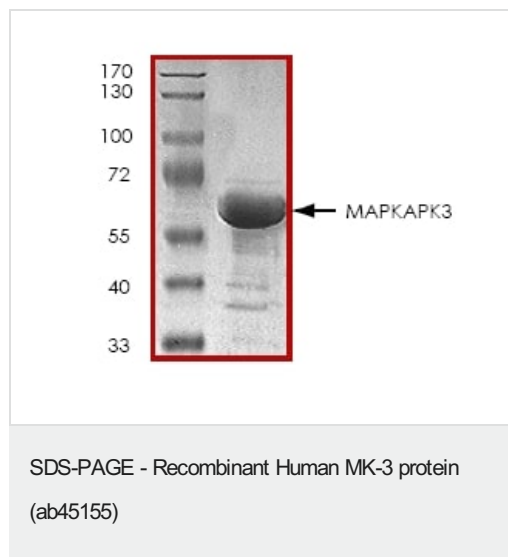
#### Post-translational modifications

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.

#### Cellular localization

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

## Images



**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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