


Product datasheet

Anti-MK-3 antibody ab155178

4 Images

Overview

Product name	Anti-MK-3 antibody
Description	Rabbit polyclonal to MK-3
Host species	Rabbit
Tested applications	Suitable for: WB, ICC/IF
Species reactivity	Reacts with: Mouse, Human Predicted to work with: Rat, Cow, Pig 
Immunogen	Recombinant fragment corresponding to Human MK-3 aa 89-382 (C terminal). Database link: Q16644
Positive control	H1299, HeLaS3 and Mouse spleen lysates; HeLa cells.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.00 Preservative: 0.01% Thimerosal (merthiolate) Constituents: 1.21% Tris, 0.75% Glycine, 10% Glycerol (glycerin, glycerine)
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab155178 in the following tested applications.

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

Application	Abreviews	Notes
WB		1/1000 - 1/10000. Predicted molecular weight: 43 kDa.
ICC/IF		1/100 - 1/1000.

Target**Function**

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 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.

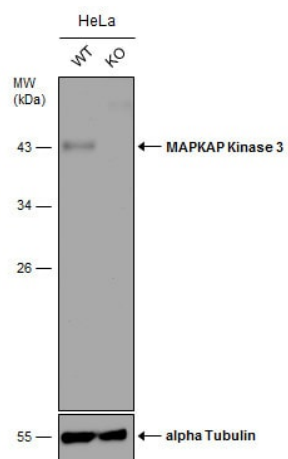
Post-translational modifications

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



Western blot - Anti-MK-3 antibody (ab155178)

All lanes : Anti-MK-3 antibody (ab155178) at 1/5000 dilution

Lane 1 : WT HeLa cell extract

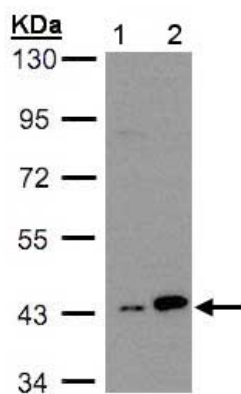
Lane 2 : MK-3 Knockout HeLa cell extracts

Lysates/proteins at 30 µg per lane.

Secondary

All lanes : HRP-conjugated anti-rabbit IgG

Predicted band size: 43 kDa



Western blot - Anti-MK-3 antibody (ab155178)

All lanes : Anti-MK-3 antibody (ab155178) at 1/3000 dilution

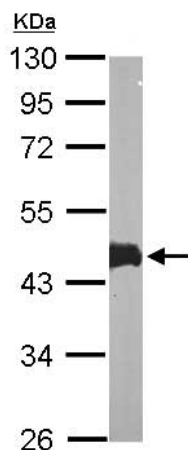
Lane 1 : H1299 whole cell lysate

Lane 2 : HeLa S3 whole cell lysate

Lysates/proteins at 30 µg per lane.

Predicted band size: 43 kDa

10% SDS PAGE

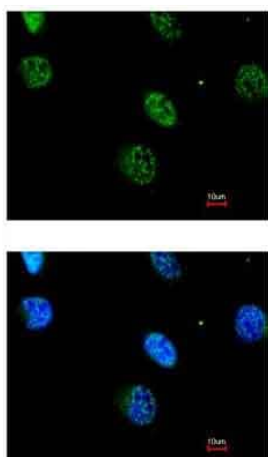


Western blot - Anti-MK-3 antibody (ab155178)

Anti-MK-3 antibody (ab155178) at 1/10000 dilution + Mouse spleen whole cell lysate at 50 µg

Predicted band size: 43 kDa

10% SDS PAGE



Immunocytochemistry/ Immunofluorescence - Anti-MK-3 antibody (ab155178)

Immunofluorescence analysis of paraformaldehyde-fixed HeLa cells labeling MK-3 with ab155178 at 1/200 dilution (green). Lower image shows merge with DNA probe (blue).

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

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