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Anti-MAPKAPK3 Antibody

Catalog # AP53354

Product Information

Application	WB, IHC, IF/IC
Primary Accession	Q16644
Reactivity	Human, Pig
Host	Rabbit
Clonality	Polyclonal
Calculated MW	42987

Additional Information

Gene ID	7867
Other Names	MAP kinase-activated protein kinase 3; MAPK-activated protein kinase 3; MAPKAP kinase 3; MAPKAP-K3; MAPKAPK-3; MK-3; Chromosome 3p kinase; 3pK
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human MAPKAPK3. The exact sequence is proprietary.
Dilution	WB~~ 1:1000 IHC~~1:100~500 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

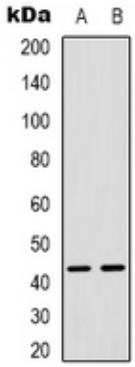
Name	MAPKAPK3
Function	Stress-activated serine/threonine-protein kinase involved in cytokines production, endocytosis, cell migration, chromatin remodeling and transcriptional regulation. Following stress, it is phosphorylated and activated by MAP kinase p38-alpha/MAPK14, leading to phosphorylation of 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.
Cellular Location	Nucleus. Cytoplasm. Note=Predominantly located in the nucleus, when activated it translocates to the cytoplasm
Tissue Location	Widely expressed, with a higher expression level observed in heart and skeletal muscle. No expression in brain Expressed in the retinal pigment epithelium (PubMed:26744326)

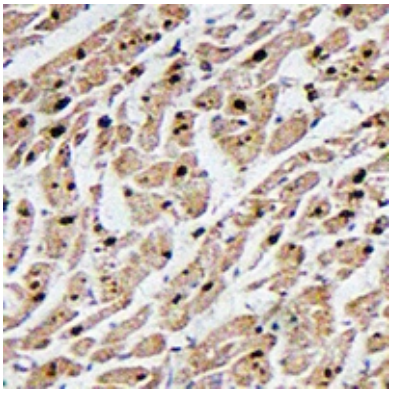
References

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Sithanandam G.,et al.Mol. Cell. Biol. 16:868-876(1996).
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Goshima N.,et al.Nat. Methods 5:1011-1017(2008).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.

Images

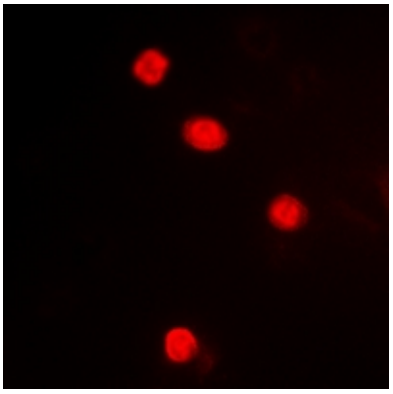


Western blot analysis of MAPKAPK3 expression in Hela (A), Jurkat (B) whole cell lysates. (Predicted band size: 42 kD; Observed band size: 43 kD)



Immunohistochemical analysis of MAPKAPK3 staining in human heart formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Immunofluorescent analysis of MAPKAPK3 staining in Hela cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked



with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark.

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