

**MAPK3 Antibody**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP50067****Specification**

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**MAPK3 Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">Q16644</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	43 KDa
Antigen Region	310-341

**MAPK3 Antibody - 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, MAPKAPK3

**Dilution**

WB~~ 1:1000

IHC~~1:50-1:100

**Format**

Rabbit IgG in phosphate buffered saline (without Mg<sup>2+</sup> and Ca<sup>2+</sup>), pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 50% glycerol.

**Storage Conditions**

-20°C

**MAPK3 Antibody - 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

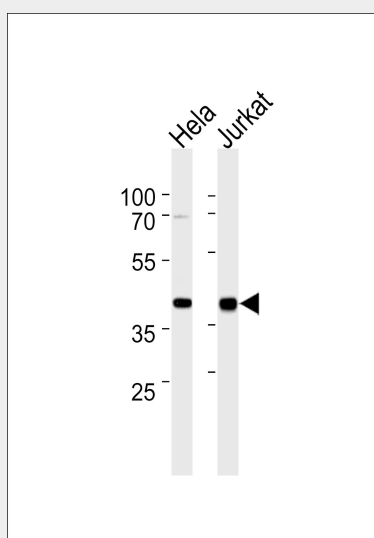
Widely expressed, with a higher expression level observed in heart and skeletal muscle. No expression in brain Expressed in the retinal pigment epithelium (PubMed:26744326)

### MAPK3 Antibody - Protocols

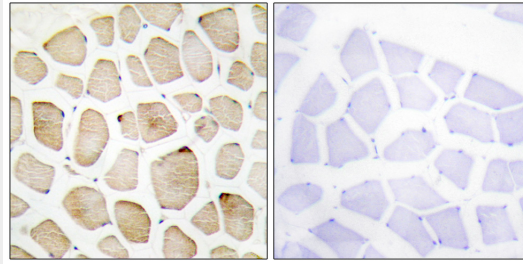
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### MAPK3 Antibody - Images



Western blot analysis of lysate from HeLa, Jurkat cell line, using MAPK3 Antibody (C11133). C11133 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L (HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35 µg per lane.



Immunohistochemistry analysis of paraffin-embedded human skeletal muscle tissue using MAPK3 antibody.

### **MAPK3 Antibody - Background**

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.

### **MAPK3 Antibody - References**

McLaughlin M.M.,et al.J. Biol. Chem. 271:8488-8492(1996).  
Sithanandam G.,et al.Mol. Cell. Biol. 16:868-876(1996).  
Sithanandam G.,et al.Mol. Cell. Biol. 16:1880-1880(1996).  
Goshima N.,et al.Nat. Methods 5:1011-1017(2008).  
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.