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# MEK3 (MAP2K3) Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7915a

## Product Information

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| **Application** | WB, IHC-P, E |
| **Primary Accession** | P46734 |
| **Reactivity** | Human |
| **Predicted** | Mouse, Rat, Bovine, Canine, Rabbit |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Calculated MW** | 39318 |
| **Antigen Region** | 15-45 |

## Additional Information

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| **Gene ID** | 5606 |
| **Other Names** | Dual specificity mitogen-activated protein kinase kinase 3, MAP kinase kinase 3, MAPKK 3, MAPK/ERK kinase 3, MEK 3, Stress-activated protein kinase kinase 2, SAPK kinase 2, SAPKK-2, SAPKK2, MAP2K3, MEK3, MKK3, PRKMK3, SKK2 |
| **Target/Specificity** | This MEK3 (MAP2K3) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 15-45 amino acids from the N-terminal region of human MEK3 (MAP2K3). |
| **Dilution** | WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration. |
| **Format** | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS. |
| **Storage** | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | MEK3 (MAP2K3) Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | MAP2K3 |
| **Synonyms** | MEK3, MKK3, PRKMK3, SKK2 |
| **Function** | Dual specificity kinase. Is activated by cytokines and environmental stress in |

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| | vivo. Catalyzes the concomitant phosphorylation of a threonine and a tyrosine residue in the MAP kinase p38. Part of a signaling cascade that begins with the activation of the adrenergic receptor ADRA1B and leads to the activation of MAPK14. |
| **Tissue Location** | Abundant expression is seen in the skeletal muscle. It is also widely expressed in other tissues |

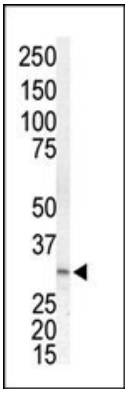
## Background

MAP2K3 is a dual specificity protein kinase that belongs to the MAP kinase kinase family. This kinase is activated by mitogenic and environmental stress, and participates in the MAP kinase-mediated signaling cascade. It phosphorylates and thus activates MAPK14/p38-MAPK. This kinase can be activated by insulin, and is necessary for the expression of glucose transporter. Expression of RAS oncogene is found to result in the accumulation of the active form of this kinase, which thus leads to the constitutive activation of MAPK14, and confers oncogenic transformation of primary cells. The inhibition of this kinase is involved in the pathogenesis of Yersina pseudotuberculosis.

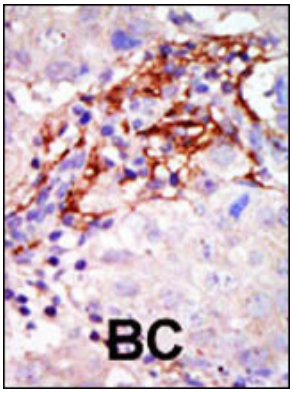
## References

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Lim, S., et al., J. Biol. Chem. 277(28):25040-25046 (2002).
Han, Q., et al., J. Biol. Chem. 277(50):48379-48385 (2002).
Wang, W., et al., Mol. Cell. Biol. 22(10):3389-3403 (2002).

## Images

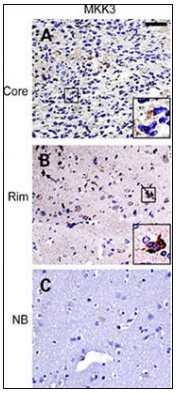



Western blot analysis of anti-MKK3 Pab (Cat. #AP7915a) in Jurkat cell lysate. MKK3 (arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.




Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

IHC of matched glioma core (top row) and rim (middle row) samples as well as normal brain control (bottom




row) from a glioma invasion specific tissue microarray. Insets, individual tumor cells (black squares) are presented at higher magnification to facilitate interpretation of the staining pattern. Staining for MKK3 and pMKK3 exhibits strong signal in majority of invasive cells (B ) compared with stationary cells from tumor core (A ). Normal brain control shows only weak staining in reactive astrocytes (C ).

## Citations

- MAP-ing glioma invasion: mitogen-activated protein kinase kinase 3 and p38 drive glioma invasion and progression and predict patient survival.

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