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Mouse Mapk11 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5362

Specification

Mouse Mapk11 Antibody (N-term) - Product Information

Application	**FC, IHC-P, WB,E**
Primary Accession	Q9WUI1
Other Accession	Q15759
Reactivity	**Mouse**
Predicted	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**H=41;M=41 KDa**
Isotype	**Rabbit IgG**
Antigen Source	**MOUSE**

Mouse Mapk11 Antibody (N-term) - Additional Information

Gene ID 19094

Antigen Region
1-30

Other Names
Mapk11; Prkm11; Mitogen-activated protein kinase 11; Mitogen-activated protein kinase p38 beta

Dilution
FC~~1:25
IHC-P~~1:10~50
WB~~1:1000

Target/Specificity
This Mouse Mapk11 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of mouse Mapk11.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

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
Mouse Mapk11 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Mouse Mapk11 Antibody (N-term) - Protein Information

Name Mapk11

Synonyms Prkm11

Function
Serine/threonine kinase which acts as an essential component of the MAP kinase signal transduction pathway. MAPK11 is one of the four p38 MAPKs which play an important role in the cascades of cellular responses evoked by extracellular stimuli such as pro-inflammatory cytokines or physical stress leading to direct activation of transcription factors. Accordingly, p38 MAPKs phosphorylate a broad range of proteins and it has been estimated that they may have approximately 200 to 300 substrates each. MAPK11 functions are mostly redundant with those of MAPK14. Some of the targets are downstream kinases which are activated through phosphorylation and further phosphorylate additional targets. RPS6KA5/MSK1 and RPS6KA4/MSK2 can directly phosphorylate and activate transcription factors such as CREB1, ATF1, the NF-kappa-B isoform RELA/NFKB3, STAT1 and STAT3, but can also phosphorylate histone H3 and the nucleosomal protein HMGN1. RPS6KA5/MSK1 and RPS6KA4/MSK2 play important roles in the rapid induction of immediate-early genes in response to stress or mitogenic stimuli, either by inducing chromatin remodeling or by recruiting the transcription machinery (PubMed:11909979). On the other hand, two other kinase targets, MAPKAPK2/MK2 and MAPKAPK3/MK3, participate in the control of gene expression mostly at the post-transcriptional level, by phosphorylating ZFP36 (tristetraprolin) and ELAVL1, and by regulating EEF2K, which is important for the elongation of mRNA during translation. MKNK1/MNK1 and MKNK2/MNK2, two other kinases activated by p38 MAPKs, regulate protein synthesis by phosphorylating the initiation factor EIF4E2. In the cytoplasm, the p38 MAPK pathway is an important regulator of protein turnover. For example, CFLAR is an inhibitor of TNF-induced apoptosis whose proteasome-mediated degradation is regulated by p38 MAPK phosphorylation. Ectodomain shedding of transmembrane proteins is regulated by p38 MAPKs as well. In response to inflammatory stimuli, p38 MAPKs phosphorylate the membrane- associated metalloprotease ADAM17. Such phosphorylation is required for ADAM17-mediated ectodomain shedding of TGF-alpha family ligands, which results in the activation of EGFR signaling and cell proliferation. Additional examples of p38 MAPK substrates are the FGFR1. FGFR1 can be translocated from the extracellular space into the cytosol and nucleus of target cells, and regulates processes such as rRNA synthesis and cell growth. FGFR1 translocation requires p38 MAPK activation. In the nucleus, many transcription factors are phosphorylated and activated by p38 MAPKs in response to different stimuli. Classical examples include ATF1, ATF2, ATF6, ELK1, PTPRH, DDIT3, TP53/p53 and MEF2C and MEF2A. The p38 MAPKs are emerging as important modulators of gene expression by regulating chromatin modifiers and remodelers. The promoters of several genes involved in the inflammatory response, such as IL6, IL8 and IL12B, display a p38 MAPK-dependent enrichment of histone H3 phosphorylation on 'Ser-10' (H3S10ph) in LPS-stimulated myeloid cells. This phosphorylation enhances the accessibility of the cryptic NF-kappa-B-binding sites marking promoters for increased NF-kappa-B recruitment. Phosphorylates methyltransferase DOT1L on 'Ser-834', 'Thr- 900', 'Ser-902', 'Thr-984', 'Ser-1001', 'Ser-1009' and 'Ser-1104' (By similarity).

Cellular Location
Cytoplasm. Nucleus.

Mouse Mapk11 Antibody (N-term) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot

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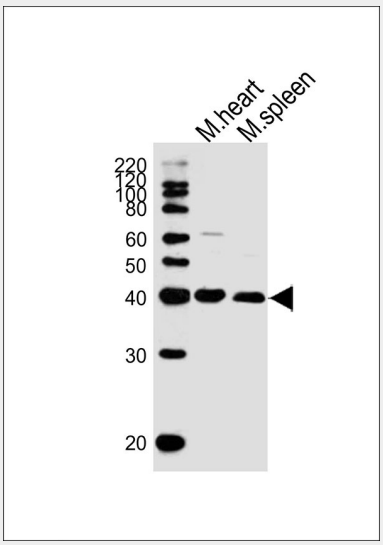
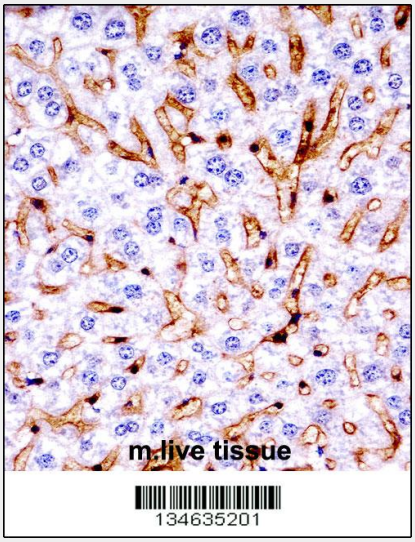
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Mouse Mapk11 Antibody (N-term) - Images



All lanes : Anti-Mapk11 Antibody (N-term)(AW5362) at 1/1000 dilution Lane 1: mouse heart lysates Lane 2: mouse spleen lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugated at 1/10000 dilution Predicted band size : 40 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Mouse Mapk11 Antibody (N-term) (AW5362)immunohistochemistry analysis in formalin fixed and paraffin embedded mouse live tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of Mouse Mapk11 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.

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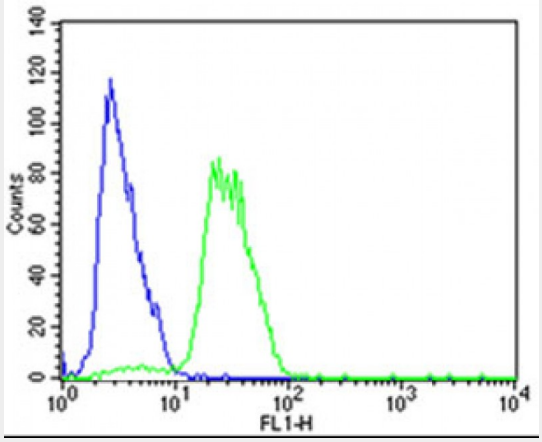

Flow cytometric analysis of SH-SY5Y cells using Mouse Mapk11 Antibody (N-term)(green, Cat#AW5362) compared to an isotype control of rabbit IgG(blue). AW5362 was diluted at 1:25 dilution. An Alexa Fluor® 488 goat anti-rabbit lgG at 1:400 dilution was used as the secondary antibody.

Mouse Mapk11 Antibody (N-term) - Background

Kinase involved in a signal transduction pathway that is activated by changes in the osmolarity of the extracellular environment, by cytokines, or by environmental stress. Phosphorylates preferentially transcription factor ATF2 (By similarity).