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Mouse Map2k7 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14155c

Product Information

Application	WB, IHC-P, E
Primary Accession	Q8CE90
Other Accession	Q4KSH7, O14733, NP_001157644.1, NP_001036022.1
Reactivity	Human, Mouse
Predicted	Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB34811
Calculated MW	59312
Antigen Region	206-233

Additional Information

Gene ID	26400
Other Names	Dual specificity mitogen-activated protein kinase kinase 7, MAP kinase kinase 7, MAPKK 7, JNK-activating kinase 2, MAPK/ERK kinase 7, MEK 7, c-Jun N-terminal kinase kinase 2, JNK kinase 2, JNKK 2, Map2k7 {ECO:0000312|MGI:MGI:1346871}
Target/Specificity	This Mouse Map2k7 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 206-233 amino acids from the Central region of mouse Map2k7.
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 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 Map2k7 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Map2k7 {ECO:0000312|MGI:MGI:1346871}

Function	Dual specificity protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. Essential component of the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/JNK) signaling pathway. With MAP2K4/MKK4, is the one of the only known kinase to directly activate the stress-activated protein kinase/c-Jun N-terminal kinases MAPK8/JNK1, MAPK9/JNK2 and MAPK10/JNK3. MAP2K4/MKK4 and MAP2K7/MKK7 both activate the JNKs by phosphorylation, but they differ in their preference for the phosphorylation site in the Thr-Pro-Tyr motif. MAP2K4/MKK4 shows preference for phosphorylation of the Tyr residue and MAP2K7/MKK7 for the Thr residue. The monophosphorylation of JNKs on the Thr residue is sufficient to increase JNK activity indicating that MAP2K7/MKK7 is important to trigger JNK activity, while the additional phosphorylation of the Tyr residue by MAP2K4/MKK4 ensures optimal JNK activation. Has a specific role in JNK signal transduction pathway activated by pro-inflammatory cytokines. The MKK/JNK signaling pathway is also involved in mitochondrial death signaling pathway, including the release cytochrome c, leading to apoptosis. Part of a non-canonical MAPK signaling pathway, composed of the upstream MAP3K12 kinase and downstream MAP kinases MAPK1/ERK2 and MAPK3/ERK1, that enhances the AP-1-mediated transcription of APP in response to APOE (PubMed:28111074).
Cellular Location	Nucleus. Cytoplasm
Tissue Location	Expressed at high levels in brain, lung, liver, skeletal muscle, kidney, and testis and at lower levels in the heart and spleen.

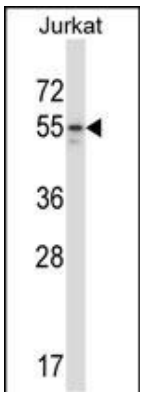
Background

Stress activated, dual specificity kinase that activates the JUN kinases MAPK8/JNK1, MAPK9/JNK2 and MAPK10/JNK3.

References

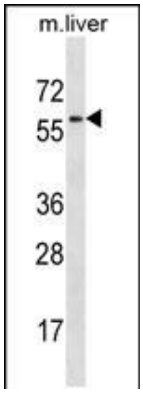
Bogani, D., et al. PLoS Biol. 7 (9), E1000196 (2009) :
Derradji, H., et al. Dev. Biol. 322(2):302-313(2008)
Nishitai, G., et al. J. Cell. Biochem. 104(5):1771-1780(2008)
Wang, X., et al. Mol. Cell. Biol. 27(22):7935-7946(2007)
Jaeschke, A., et al. Mol. Cell 27(3):498-508(2007)

Images

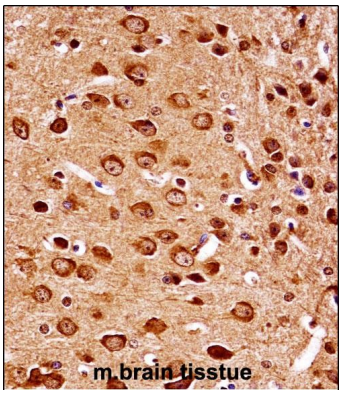


Mouse Map2k7 Antibody (Center) (Cat. #AP14155c) western blot analysis in Jurkat cell line lysates (35ug/lane).This demonstrates the Map2k7 antibody detected the Map2k7 protein (arrow).

Mouse Map2k7 Antibody (Center) (Cat. #AP14155c) western blot analysis in mouse liver tissue lysates



(35ug/lane).This demonstrates the Map2k7 antibody detected the Map2k7 protein (arrow).



Mouse Map2k7 Antibody (Center) (AP14155c)immunohistochemistry analysis in formalin fixed and paraffin embedded mouse brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of Mouse Map2k7 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.