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MNK2 (MKNK2) Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7058a

Product Information

Application	WB, E
Primary Accession	Q9HBH9
Other Accession	Q5U2N4, Q8CDB0
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB5445
Calculated MW	51875
Antigen Region	70-100

Additional Information

Gene ID	2872
Other Names	MAP kinase-interacting serine/threonine-protein kinase 2, MAP kinase signal-integrating kinase 2, MAPK signal-integrating kinase 2, Mnk2, MKNK2, GPRK7, MNK2
Target/Specificity	This MNK2 (MKNK2) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 70-100 amino acids from the N-terminal region of human MNK2 (MKNK2).
Dilution	WB~~1:1000 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	MNK2 (MKNK2) Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

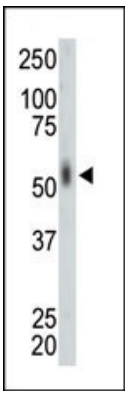
Name	MKNK2
Synonyms	GPRK7, MNK2

Function	Serine/threonine-protein kinase that phosphorylates SFPQ/PSF, HNRNPA1 and EIF4E. May play a role in the response to environmental stress and cytokines. Appears to regulate translation by phosphorylating EIF4E, thus increasing the affinity of this protein for the 7-methylguanosine-containing mRNA cap. Required for mediating PP2A- inhibition-induced EIF4E phosphorylation. Triggers EIF4E shuttling from cytoplasm to nucleus. Isoform 1 displays a high basal kinase activity, but isoform 2 exhibits a very low kinase activity. Acts as a mediator of the suppressive effects of IFNgamma on hematopoiesis. Negative regulator for signals that control generation of arsenic trioxide As(2)O(3)-dependent apoptosis and anti-leukemic responses. Involved in anti-apoptotic signaling in response to serum withdrawal.
Cellular Location	[Isoform 2]: Nucleus, PML body.
Tissue Location	Ubiquitously expressed in all tissues examined. Isoform 2 is expressed at higher levels in the ovary than is isoform 1

Background

MAP kinase-interacting kinase 1 (Mnk1) and Mnk2, members of the Ser/Thr protein kinase family, bind tightly to the growth factor-regulated MAP kinases, Erk1 and Erk2. Erk and p38 phosphorylate MNK1 and Mnk2, which stimulates their in vitro kinase activity toward a substrate, eukaryotic initiation factor-4E (eIF-4E). Overexpression of Mnk2 results in increased phosphorylation of endogenous eIF-4E, showing that it can act as an eIF-4E kinase in vivo. Mnk2 may play a role in the response to environmental stress and cytokines. This ubiquitiously expressed protein appears to regulate transcription by phosphorylating eIF-4E, thus increasing the affinity of this protein for the 7-methylguanosine-containing mRNA cap. Expression of active mutants of MNK1 and MNK2 in 293 cells diminishes cap-dependent translation relative to cap-independent translation in a transient reporter assay. Human Mnk2 is homologous to murine Mnk2 (approximately 94% identical) and human Mnk1 (71% identical). In vitro phosphorylation studies show that Mnk2 is a significantly better substrate than Mnk1 for extracellular signal-regulated kinase 2 (Erk2), p38MAPKalpha, and p38MAPKbeta. Mnk2 has also been shown to interact with the C-terminal regions of eIF-4G1 and eIF-4G2.

Images



The anti-MKNK2 Pab (Cat. #AP7058a) is used in Western blot to detect MKNK2 in mouse lung tissue lysate.