Product Information

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Anti-MNK2 (N-terminal)
produced in rabbit, affinity isolated antibody

Catalog Number **M0696**

Anti-MNK2 (N-terminal) is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acids 51-64 of human MNK2 (corresponding to isoforms 1 and 2) (GeneID: 2872), conjugated to KLH via a C-terminal added cysteine residue. The corresponding sequence is conserved in human, rat and mouse. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-MNK2 (N-terminal) specifically recognizes human MNK2. Applications include immunoblotting (~50 kDa), immunoprecipitation, and immunofluorescence. Staining of the MNK2 band in immunoblotting is specifically inhibited by the immunizing peptide.

MNK2 (MAP kinase-interacting kinase 2, also known as MKNK2 and GPRK7) is a serine/threonine kinase first identified as an MAP kinase (MAPK)-interacting protein that can be phosphorylated by the MAPKs.[1] It is part of a subfamily whose members are MNK1 and MNK2. Both are implicated in the regulation of protein synthesis through their phosphorylation of eukaryotic initiation factor 4E (eIF4E) on Ser^{209} in response to mitogens and cellular stress.[2,3] eIF4E is a central component in the initiation and regulation of translation in eukaryotic cells. It regulates the recruitment of mRNAs to the ribosome.[4,5] Phosphorylation of eIF4E by MNKs alters its affinity for capped mRNA.[6,7] MNK1 and MNK2 are closely related, but differ in their basal activity and regulation. MNK2 shows a much higher activity in unstimulated cells than MNK1, whose activity is greatly increased by stimulation of the MAPK pathway.[3] The human MNK2 gene has two C-terminal splice variants, designated MNK2a and MNK2b.[8] The N- and C-termini of the splice variants determine their activity and localization. While MNK2a is cytoplasmic, a substantial amount of MNK2b is found in the nucleus.[9] Mice in which the Mnk genes have been inactivated were viable, fertile and developed normally, although eIF4E was not phosphorylated.[10] Recently the MNKs were identified as potential therapeutic targets for breast cancer treatments.[11]

Reagent
Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~1.0 mg/mL

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability
For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile
Immunoblotting: a working concentration of 1-2 µg/mL is recommended using lysates of HEK-293T cells transfected with human MNK2.

Immunoprecipitation: a working amount of 2-4 µg is recommended using lysates of HEK-293T cells transfected with human MNK2.

Immunocytochemistry: a working concentration of 2-5 µg/mL is recommended using paraformadehyde fixed HEK-293T cells transfected with human MNK2.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References
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