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Product Information

Anti-Paip2
produced in rabbit, affinity isolated antibody

Catalog Number **P0087**

Product Description

Anti-Paip2 is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acids 93-109 of human Paip2 (GeneID: 51247), conjugated to KLH via an added cysteine residue. The immunizing peptide differs from the rat sequence in three amino acids. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Paip2 specifically recognizes human and mouse Paip2. The antibody may be used is various immunochemical techniques including immunoblotting (~26 kDa) and immunoprecipitation. Detection of the Paip2 band by immunoblotting is specifically inhibited by the immunizing peptide.

The mRNA 5' cap structure (termed cap m^7GpppN, where N is any nucleotide) and the 3' poly (A) tail act synergistically and have important roles in translation and its control. This synergy is mediated by physical interaction of EIF4G and poly (A) binding protein (PABP), which leads to circularization of the mRNA.[1] PABP activity is regulated by two PABP-interacting proteins (Paips), Paip1 and Paip2. [2, 3]

Paip2 (also known as Poly(A)-binding protein-interacting protein 2, PABP-interacting protein 2 and PAIP-2), a ~70 kDa protein that stimulates translation in vivo, contains two binding sites for PABP, PAM1 and PAM2 (for PABP-interacting motif 1 and 2) and binds PABP with a 1:1 stoichiometry.[4] Paip2, a highly acidic protein with molecular size of ~14 kDa, also contains two PAMs, but in contrast to Paip1 inhibits translation and binds PABP in a 1:2 stoichiometry.[5] Several mechanisms by which Paip2 inhibits translation were reported: (i) Paip2 competes with Paip1 for binding to PABP, (ii)-Paip2 decreases the affinity of PABP to polyadenilated RNA,[3] and (iii) competing with eIF4G for binding PABP.[6] A new Paip2 homolog, Paip2B, was cloned and characterized and found to share 80% similarity with Paip2 (henceforth denoted Paip2A). Paip2B acts similarly to Paip2A and inhibits translation, however the two proteins differ in their expression level in different tissues.[7]

Reagent

Supplied as a solution in 0.01 M PBS, 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 antibody concentration of 0.5-1 μg/mL is recommended using mouse embryo extract.

Immunoprecipitation: a working antibody concentration of 5-10 μg/mL is recommended using HeLa cell lysate.

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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4. Roy, G., et al., *Mol. Cell. Biol*., **22**, 3769-3782 (2002) .
5. Khaleghpour, K., et al., *Mol. Cell. Biol*., **21,** 5200-5213 (2001).
6. Karim, M.M., et al., *Proc. Natl. Acad. Sci. USA,* **103**, 9494-9499 (2006).
7. Berlanga, J.J., et al., *RNA*, **12**, 1556-1568 (2006).

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