Revision 1

#3505 Store at -20C

Asymmetric-Methyl-PABP1 (Arg455/Arg460) (C60A10) Rabbit mAb

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IHC-P, IF-IC	H M R Mk	Endogenous	71	Rabbit IgG	#P11940	26986

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:25
Immunohistochemistry (Paraffin)	1:1000
Immunofluorescence (Immunocytochemistry)	1:400

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Methyl-PABP1 (Arg455/Arg460) (C60A10) Rabbit mAb detects endogenous levels of PABP1 only when methylated on Arg455 or Arg460.

Species predicted to react based on 100% sequence homology

Chicken, Horse

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the sequence of human PABP1 in which Arg455 and Arg460 are methylated.

Background

Poly(A)-binding protein 1 (PABP1) associates with the 3' poly(A) tail of mRNA and also eIF4F (1,2). eIF4F is a complex whose functions include the recognition of the mRNA 5' cap structure (eIF4E), delivery of an RNA helicase to the 5' region (eIF4A), bridging of the mRNA and the ribosome (eIF4G), and circularization of the mRNA via interaction between eIF4G and the poly(A) binding protein (PABP). PABP1 has been shown to have multiple functions including translation initiation, mRNA stabilization, and mRNA turnover (3,4). Phosphorylation of PABP has been shown to enhance RNA binding in eukaryotes, and PABP1 has been shown to shuttle between the nucleus and cytoplasm (5,6). PABP1 is methylated on Arg455 and Arg460 by the CARM1 protein methyltransferase (7,8); however, the function of this methylation has yet to be determined.

Background References

1. Sachs, A. B. et al. (1986) *Cell* 45, 827-835.
2. Piron, M. et al. (1998) *EMBO J.* 17, 5811-5821.
3. Caponigro, G. and Parker, R. (1995) *Genes Dev.* 9, 2421-2432.
4. Sachs, A.B. and Davis, R.W. (1989) *Cell* 58, 857-867.
5. Le, H. et al. (2000) *J. Biol. Chem.* 275, 17452-17462.
6. Afonina, E. et al. (1998) *J. Biol. Chem.* 273, 13015-13021.
7. Lee, J. and Bedford, M.T. (2002) *EMBO Rep* 3, 268-73.
8. Yadav, N. et al. (2003) *Proc Natl Acad Sci U S A* 100, 6464-8.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin) **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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