Revision 3

#57246 Store at -20C

PTBP1 (E4I3Q) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, ChIP, eCLIP	H M R Mk	Endogenous	57, 59	Rabbit IgG	#P26599-1	5725

Product Usage Information

For optimal ChIP results, use 10 µl of antibody and 10 µg of chromatin (approximately 4 x 10^6 cells) per IP. This antibody has been validated using SimpleChIP® Enzymatic Chromatin IP Kits.

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100
Chromatin IP	1:50
eCLIP	1:200

For more information about eCLIP and the RBP-eCLIP kit, please visit Eclipse Bioinnovations.

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

PTBP1 (E4I3Q) Rabbit mAb recognizes endogenous levels of total PTBP1 protein. This antibody does not cross-react with PTBP2 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val10 of human PTBP protein.

Background

PTBP1 and PTBP2 are highly related pre-mRNA binding proteins that silence the splicing of alternative exons (1,2). While PTBP1 is widely expressed, PTBP2, also known as neural PTB or nPTB, is expressed in post-mitotic neurons. In other cell types, PTBP2 transcripts are alternatively spliced by PTBP1, which leads to nonsense-mediated decay (3). PTBP1 and 2 bind to similar regions across the transcriptome, but PTBP1 has a stronger repressive property likely due to cofactors such as Raver1 and Matrin3 (4-6). Overexpression of PTBPs in various cancers has been observed, leading to alternative splicing of key proteins in oncogenic pathways (6-9).

Background References

1. Amir-Ahmady, B. et al. (2005) *RNA* 11, 699-716.
2. Oberstrass, F.C. et al. (2005) *Science* 309, 2054-7.
3. Boutz, P.L. et al. (2007) *Genes Dev* 21, 1636-52.
4. Keppetipola, N.M. et al. (2016) *RNA* 22, 1172-80.
5. Vuong, J.K. et al. (2016) *Cell Rep* 17, 2766-2775.
6. Minami, K. et al. (2017) *Oncotarget* 8, 33064-33077.
7. Wang, Z.N. et al. (2017) *Oncotarget* 8, 36185-36202.
8. Uemura, Y. et al. (2017) *Genes Cells* 22, 785-798.
9. Bielli, P. et al. (2018) *Clin Cancer Res* 24, 5422-5432.

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

WB: Western Blotting **IP:** Immunoprecipitation **ChIP:** Chromatin IP **eCLIP:** eCLIP

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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