

PABPC4 siRNA (h): sc-106347

BACKGROUND

The PABPC4 (poly(A) binding protein, cytoplasmic 4) protein, also designated APP1 (activated-platelet protein 1), iPABP or PABP4, is a 644 amino acid cytoplasmic protein that contains one PABC domain and four RNA recognition motif domains. Expressed at low levels in resting T cells and at higher levels in activated T cells, PABPC4 functions to bind to the poly(A) tail of mRNA and, via this binding, is thought to be involved in metabolic processes that involve mRNA in the cytoplasm. Additionally, PABPC4 may be involved in the regulation of platelet and megakaryocyte formation and may bind and stabilize polyadenylates in platelet dense granules. Human PABPC4 shares 99% homology with its rabbit counterpart, suggesting a conserved role between species. Multiple isoforms of PABPC4 exist due to alternative splicing events.

REFERENCES

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3. Féral, C., et al. 1999. Chromosomal localization of three human poly(A)-binding protein genes and four related pseudogenes. *Hum. Genet.* 105: 347-353.
4. Féral, C., et al. 2001. Human testis expresses a specific poly(A)-binding protein. *Nucleic Acids Res.* 29: 1872-1883.
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6. Sladic, R.T., et al. 2004. Human PABP binds AU-rich RNA via RNA-binding domains 3 and 4. *Eur. J. Biochem.* 271: 450-457.
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CHROMOSOMAL LOCATION

Genetic locus: PABPC4 (human) mapping to 1p34.3.

PRODUCT

PABPC4 siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PABPC4 shRNA Plasmid (h): sc-106347-SH and PABPC4 shRNA (h) Lentiviral Particles: sc-106347-V as alternate gene silencing products.

For independent verification of PABPC4 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-106347A, sc-106347B and sc-106347C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNases and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

PABPC4 siRNA (h) is recommended for the inhibition of PABPC4 expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 μ M in 66 μ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

GENE EXPRESSION MONITORING

PABP (A-4): sc-166381 is recommended as a control antibody for monitoring of PABPC4 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PABPC4 gene expression knockdown using RT-PCR Primer: PABPC4 (h)-PR: sc-106347-PR (20 μ l, 578 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.