

PRP4 kinase (T-24): sc-130856

BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine (Ser/Thr) protein kinases. PRP4 kinase, also known as PRPF4B, PRP4H or PRP4K, is a 1,007 amino acid nuclear protein that contains one protein kinase domain and belongs to the Ser/Thr protein kinase family. Expressed ubiquitously, PRP4 kinase functions to catalyze the ATP-dependent phosphorylation of target proteins and is thought to play a role in pre-mRNA splicing, possibly participating in the spliceosome C complex. Human PRP4 kinase shares 98% sequence identity with its mouse counterpart, suggesting a conserved role between species.

REFERENCES

- Gross, T., et al. 1997. Functional analysis of the fission yeast Prp4 protein kinase involved in pre-mRNA splicing and isolation of a putative mammalian homologue. *Nucleic Acids Res.* 25: 1028-1035.
- Huang, Y., et al. 2000. Characterization of hPRP4 kinase activation: potential role in signaling. *Biochem. Biophys. Res. Commun.* 271: 456-463.
- Kojima, T., et al. 2001. Cloning of human PRP4 reveals interaction with CLK1. *J. Biol. Chem.* 276: 32247-32256.
- Dellaire, G., et al. 2002. Mammalian PRP4 kinase copurifies and interacts with components of both the U5 snRNP and the N-CoR deacetylase complexes. *Mol. Cell. Biol.* 22: 5141-5156.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602338. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Bennett, E.M., et al. 2004. Human immunodeficiency virus type 2 Gag interacts specifically with PRP4, a serine-threonine kinase, and inhibits phosphorylation of splicing factor SF2. *J. Virol.* 78: 11303-11312.
- Bottner, C.A., et al. 2005. Multiple genetic and biochemical interactions of Brr2, PRP8, PRP31, PRP1 and PRP4 kinase suggest a function in the control of the activation of spliceosomes in *Schizosaccharomyces pombe*. *Curr. Genet.* 48: 151-161.
- Sjöblom, T., et al. 2006. The consensus coding sequences of human breast and colorectal cancers. *Science* 314: 268-274.
- Huang, B., et al. 2007. Interaction of PRP4 with Kruppel-like factor 13 regulates CCL5 transcription. *J. Immunol.* 178: 7081-7087.

CHROMOSOMAL LOCATION

Genetic locus: PRPF4B (human) mapping to 6p25.2.

SOURCE

PRP4 kinase (T-24) is a purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of PRP4 kinase of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PRP4 kinase (T-24) is recommended for detection of PRP4 kinase of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

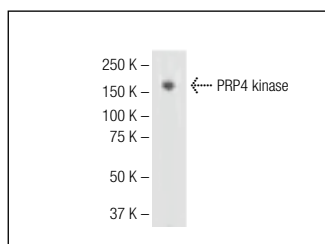
Suitable for use as control antibody for PRP4 kinase siRNA (h): sc-76257, PRP4 kinase shRNA Plasmid (h): sc-76257-SH and PRP4 kinase shRNA (h) Lentiviral Particles: sc-76257-V.

Molecular Weight of PRP4 kinase: 152 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



PRP4 kinase (T-24): sc-130856. Western blot analysis of PRP4 kinase expression in Jurkat whole cell lysate.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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