

PSTK (H-300): sc-98322

BACKGROUND

The fidelity of protein synthesis requires efficient discrimination of amino acid substrates by aminoacyl-tRNA synthetases. Aminoacyl-tRNA synthetases function to catalyze the aminoacylation of tRNAs by their corresponding amino acids, thus linking amino acids with tRNA-contained nucleotide triplets. PSTK (phosphoseryl-tRNA kinase), also known as L-seryl-tRNA(Sec) kinase, is a 348 amino acid enzyme belonging to the L-seryl-tRNA(Sec) kinase family. An essential RNA-dependent kinase, PSTK plays a role in aminoacyl-tRNA synthesis and the biosynthesis of selenocysteine, the 21st natural amino acid. Utilizing magnesium as a cofactor, PSTK converts seryl-tRNA(Sec) to O-phosphoseryl-tRNA(Sec), the immediate precursor of selenocysteinyl-tRNA(Sec). PSTK exists as two alternatively spliced isoforms and is encoded by a gene mapping to human chromosome 10q26.13.

REFERENCES

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- Yuan, J., et al. 2006. RNA-dependent conversion of phosphoserine forms selenocysteine in eukaryotes and archaea. *Proc. Natl. Acad. Sci. USA* 103: 18923-18927.
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CHROMOSOMAL LOCATION

Genetic locus: PSTK (human) mapping to 10q26.13; Pstk (mouse) mapping to 7 F3.

SOURCE

PSTK (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of PSTK of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PSTK (H-300) is recommended for detection of PSTK of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (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 PSTK siRNA (h): sc-90790, PSTK siRNA (m): sc-152568, PSTK shRNA Plasmid (h): sc-90790-SH, PSTK shRNA Plasmid (m): sc-152568-SH, PSTK shRNA (h) Lentiviral Particles: sc-90790-V and PSTK shRNA (m) Lentiviral Particles: sc-152568-V.

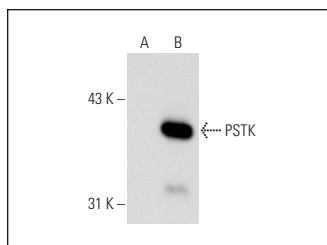
Molecular Weight of PSTK: 40 kDa.

Positive Controls: PSTK (m): 293T Lysate: sc-127415 or PSTK (h): 293T Lysate: sc-114328.

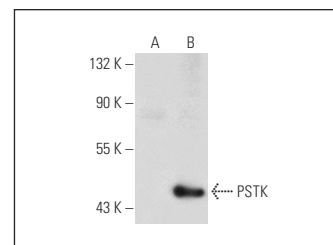
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



PSTK (H-300): sc-98322. Western blot analysis of PSTK expression in non-transfected: sc-117752 (A) and mouse PSTK transfected: sc-127415 (B) 293T whole cell lysates.



PSTK (H-300): sc-98322. Western blot analysis of PSTK expression in non-transfected: sc-117752 (A) and human PSTK transfected: sc-114328 (B) 293T whole cell lysates.

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.