**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**


**CHROMOSOMAL LOCATION**

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

**SOURCE**

PSTK (B-5) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of PSTK of human origin.

**PRODUCT**

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**APPLICATIONS**

PSTK (B-5) is recommended for detection of PSTK of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 1:30-1:300).

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.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:10000-1:100000), 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-2035 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-RTC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

**DATA**

**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.