SANTA CRUZ BIOTECHNOLOGY, INC.

Cyclophilin G (S-13): sc-167570

BACKGROUND

Cyclophilins are conserved, ubiquitous and abundant cytosolic peptidyl-prolyl *cis-trans* isomerases that accelerate the isomerization of XaaPro peptide bonds and the refolding of proteins. Cyclophilin G, also known as CARS-Cyp (Clk-associating RS-cyclophilin), SRcyp (SR-cyclophilin), CASP10, PPIase G or Rotamase G, is a ubiquitously expressed member of the Moca family of cyclophilins. Localizing to the nucleus and, during interphase, nuclear speckles, Cyclophilin G contains an N-terminal cyclophilin-type domain, an acidic serine-rich region, five Cdc2-type phosphorylation sites and a series of serine-arginine repeats throughout the C-terminus. Cyclophilin G is phosphorylated during mitosis by the Cdc2-cyclin B complex, suggesting that its function is cell cycle-regulated. In addition, Cyclophilin G is capable of interacting with Pinin and the C-terminus of the largest subunit of RNA polymerase II (Pol II). Cyclophilin G may participate in pre-mRNA splicing by regulating the subnuclear localization of SR/SR-like protein family members.

REFERENCES

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3. Bourquin, J.P., et al. 1997. A serine/arginine-rich nuclear matrix cyclophilin interacts with the C-terminal domain of RNA polymerase II. Nucleic Acids Res. 25: 2055-2061.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606093. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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6. Lin, C.L., et al. 2004. Over-expression of SR-cyclophilin, an interaction partner of nuclear pinin, releases SR family splicing factors from nuclear speckles. Biochem. Biophys. Res. Commun. 321: 638-647.
7. Chiu, Y., et al. 2006. Loss of Pnn expression attenuates expression levels of SR family splicing factors and modulates alternative pre-mRNA splicing *in vivo*. Biochem. Biophys. Res. Commun. 341: 663-671.

CHROMOSOMAL LOCATION

Genetic locus: PPIG (human) mapping to 2q31.1; Ppig (mouse) mapping to 2 C2.

SOURCE

Cyclophilin G (S-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Cyclophilin G of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-167570 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Cyclophilin G (S-13) is recommended for detection of Cyclophilin G of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other Cyclophilin family members.

Cyclophilin G (S-13) is also recommended for detection of Cyclophilin G in additional species, including bovine.

Suitable for use as control antibody for Cyclophilin G siRNA (h): sc-94752, Cyclophilin G siRNA (m): sc-142661, Cyclophilin G shRNA Plasmid (h): sc-94752-SH, Cyclophilin G shRNA Plasmid (m): sc-142661-SH, Cyclophilin G shRNA (h) Lentiviral Particles: sc-94752-V and Cyclophilin G shRNA (m) Lentiviral Particles: sc-142661-V.

Molecular Weight of Cyclophilin G: 89 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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