

Cyclophilin G (8S5): sc-100699

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, PPlase 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 sub-nuclear localization of SR/SR-like protein family members.

REFERENCES

1. Nestel, F.P., et al. 1996. RS cyclophilins: identification of an NK-TR1-related cyclophilin. *Gene* 180: 151-155.
2. Giardina, S.L., et al. 1996. Association of the expression of an SR-cyclophilin with myeloid cell differentiation. *Blood* 87: 2269-2274.
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/>
5. Dubourg, B., et al. 2004. The human nuclear SRcyp is a cell cycle-regulated cyclophilin. *J. Biol. Chem.* 279: 22322-22330.
6. Lin, C.L., et al. 2004. Overexpression of SR-cyclophilin, an interaction partner of nuclear Pinin, releases SR family splicing factors from nuclear speckles. *Biochem. Biophys. Res. Commun.* 321: 638-647.

CHROMOSOMAL LOCATION

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

SOURCE

Cyclophilin G (8S5) is a mouse monoclonal antibody raised against recombinant Cyclophilin G of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Cyclophilin G (8S5) 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), 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), 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 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.

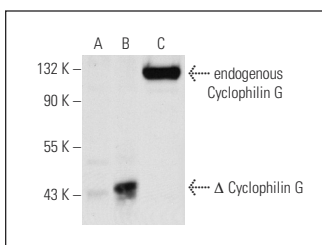
Molecular Weight of Cyclophilin G: 89 kDa.

Positive Controls: Cyclophilin G (h): 293T Lysate: sc-113551 or Jurkat nuclear extract: sc-2132.

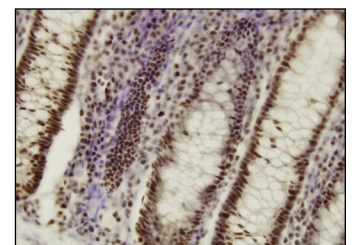
RECOMMENDED SUPPORT REAGENTS

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: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: 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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Cyclophilin G (8S5): sc-100699. Western blot analysis of Cyclophilin G expression in non-transfected: sc-117752 (A) and truncated human Cyclophilin G transfected: sc-113551 (B) 293T whole cell lysates and Jurkat nuclear extract (C).



Cyclophilin G (8S5): sc-100699. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human colon tissue showing nuclear localization.

SELECT PRODUCT CITATIONS

1. El Maassarani, M., et al. 2016. Integrated and functional genomics analysis validates the relevance of the nuclear variant ErbB380kDa in prostate cancer progression. *PLoS ONE* 11: e0155950.

RESEARCH USE

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