

# CSN7a (C-14): sc-47968

## BACKGROUND

The COP9 signalosome (CSN) complex is involved in several different developmental and cellular processes. The complex is made up of several widely expressed proteins: CSN1 (COPS1), CSN2 (COPS2), CSN3 (COPS3), CSN4 (COPS4), CSN5 (COPS5), CSN6 (COP6), CSN7a (COPS7, COPS7a) or CSN7b (COP7b) and CSN8 (COP8). The CSN complex acts as a regulator for the ubiquitin conjugation pathway by mediating the deneddylation of the SCF-type E3 ligase complexes, which leads to a decrease in ubiquitin ligase activity of SCF-complexes. It is also involved in the phosphorylation of p53, c-Jun, I $\kappa$ B $\alpha$  and IRF-8, as well as CSN-dependent phosphorylation of p53, and c-Jun protects and promotes degradation by the Ubl system. CSN7 is phosphorylated by CK2 and is composed of two subunits;  $\alpha$  and  $\beta$ . CSN7a contains a PCI (Proteasome CSN9 initiation factor 3) region, as well as a coiled-coil region and is predicted to interact with CSN2, CSN3, CSN4, CSN5, CSN6, CSN8, and GPS1. CSN7b contains only a PCI region and is predicted to interact with INT6.

## REFERENCES

- Seeger, M., Kraft, R., Ferrell, K., Bech-Otschir, D., Dumdey, R., Schade, R., Gordon, C., Naumann, M. and Dubiel, W. 1998. A novel protein complex involved in signal transduction possessing similarities to 26S proteasome subunits. The FASEB journal: official publication of the FASEB J.12: 469-478.
- Bech-Otschir, D., Kraft, R., Huang, X., Henklein, P., Kapelari, B., Pollmann, C. and Dubiel, W. 2001. COP9 signalosome-specific phosphorylation targets p53 to degradation by the ubiquitin system. EMBO J. 20: 1630-1639.
- Hoareau Alves, K., Bochar, V., Réty, S. and Jalinot, P. 2002. Association of the mammalian proto-oncoprotein Int-6 with the three protein complexes eIF3, COP9 signalosome and 26S proteasome. FEBS Lett. 527: 15-21.
- Groisman, R., Polanowska, J., Kuraoka, I., Sawada, J., Saijo, M., Drapkin, R., Kisselev, A.F., Tanaka, K. and Nakatani, Y. 2003. The ubiquitin ligase activity in the DDB2 and regulated by the COP9 signalosome in response to DNA damage. Cell 113: 357-367.

## CHROMOSOMAL LOCATION

Genetic locus: COPS7A (human) mapping to 12p13.31; Cops7a (mouse) mapping to 6 F2.

## SOURCE

CSN7a (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of CSN7a of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-47968 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

CSN7a (C-14) is recommended for detection of CSN7a of mouse 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), 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).

CSN7a (C-14) is also recommended for detection of CSN7a in additional species, including equine, canine and porcine.

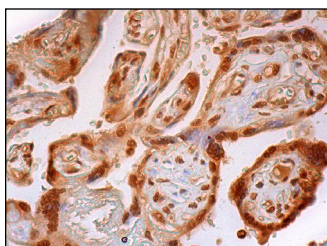
Suitable for use as control antibody for CSN7a siRNA (h): sc-60463, CSN7a siRNA (m): sc-60464, CSN7a shRNA Plasmid (h): sc-60463-SH, CSN7a shRNA Plasmid (m): sc-60464-SH, CSN7a shRNA (h) Lentiviral Particles: sc-60463-V and CSN7a shRNA (m) Lentiviral Particles: sc-60464-V.

Molecular Weight of CSN7a: 30 kDa.

## 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



CSN7a (C-14): sc-47968. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear and cytoplasmic staining of trophoblastic cells.

## STORAGE

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

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Try **CSN7a (D-6): sc-398882** or **CSN7a (H-2): sc-514067**, our highly recommended monoclonal alternatives to CSN7a (C-14).