

## CSN1 (D-4): sc-365617



The Power to Question

## 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 (COPS6), CSN7a (COPS7, COPS7a) or CSN7b (COPS7b) and CSN8 (COPS8). 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 the CSN-dependent phosphorylation of p53. c-Jun protects and promotes degradation by the Ubl system.

## REFERENCES

1. Bech-Otschir, D., et al. 2001. COP9 signalosome-specific phosphorylation targets p53 to degradation by the ubiquitin system. *EMBO J.* 20: 1630-1639.
2. Lyapina, S., et al. 2001. Promotion of NEDD-CUL1 conjugate cleavage by COP9 signalosome. *Science* 292: 1382-1385.
3. Tsuge, T., et al. 2001. The subunit 1 of the COP9 signalosome suppresses gene expression through its N-terminal domain and incorporates into the complex through the PCI domain. *J. Mol. Biol.* 305: 1-9.
4. Mundt, K.E., et al. 2002. Deletion mutants in COP9/signalosome subunits in fission yeast *Schizosaccharomyces pombe* display distinct phenotypes. *Mol. Biol. Cell* 13: 493-502.
5. Groisman, R., et al. 2003. The ubiquitin ligase activity in the DDB2 and CSA complexes is differentially regulated by the COP9 signalosome in response to DNA damage. *Cell* 113: 357-367.
6. Uhle, S., et al. 2003. Protein kinase CK2 and protein kinase D are associated with the COP9 signalosome. *EMBO J.* 22: 1302-1312.
7. Harari-Steinberg, O. and Chamovitz, D.A. 2004. The COP9 signalosome: mediating between kinase signaling and protein degradation. *Curr. Protein Pept. Sci.* 5: 185-189.
8. Wang, Y., et al. 2004. Hepatopietin interacts directly with COP9 signalosome and regulates AP-1 activity. *FEBS Lett.* 572: 85-91.

## CHROMOSOMAL LOCATION

Genetic locus: GPS1 (human) mapping to 17q25.3.

## SOURCE

CSN1 (D-4) is a mouse monoclonal antibody raised against amino acids 31-263 mapping within an internal region of CSN1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $_1$  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

CSN1 (D-4) is recommended for detection of CSN1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 CSN1 siRNA (h): sc-60455, CSN1 shRNA Plasmid (h): sc-60455-SH and CSN1 shRNA (h) Lentiviral Particles: sc-60455-V.

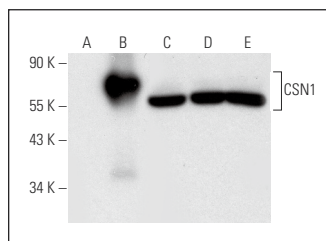
Molecular Weight of CSN1: 60 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, MCF7 whole cell lysate: sc-2206 or Raji whole cell lysate: sc-364236.

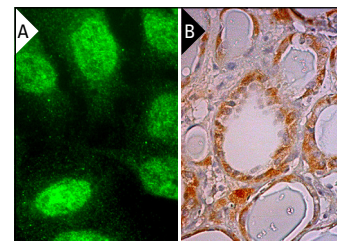
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



CSN1 (D-4): sc-365617. Western blot analysis of CSN1 expression in non-transfected 293T: sc-117752 (A), mouse CSN1 transfected 293T: sc-125175 (B), HL-60 (C), MCF7 (D) and Raji (E) whole cell lysates.



CSN1 (D-4): sc-365617. Immunofluorescence staining of formalin-fixed HepG2 cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing cytoplasmic staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

1. Phipps, S.M., et al. 2020. High content imaging of Barrett's-associated high grade dysplasia cells following siRNA library screening reveals acid responsive regulators of cellular transitions. *Cell. Mol. Gastroenterol. Hepatol.* 10: 601-622.

## RESEARCH USE

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