

GCP4 (C-18): sc-54001

BACKGROUND

The γ -tubulin complex is composed of γ tubulin and the γ -tubulin complex-associated proteins GCP2, GCP3, GCP4, GCP5 and GCP6, all of which are essential components of microtubule organizing centers. γ -tubulin complex components are localized to both the centrosome, where they are involved in microtubule nucleation, and to the cytoplasm, where they exist as soluble complexes that can be recruited to the centrosome as needed. Although the GCP proteins are related, they have distinct roles which contribute to the proper function of the γ -tubulin complex. GCP4 (γ -tubulin complex component 4), also known as TUBGCP4, is an ubiquitously expressed 667 amino acid member of the γ -tubulin complex that localizes to the metaphase spindle during mitosis. In response to proteasome inhibition, GCP4 exhibits increased accumulation at the pericentriolar material where it participates in microtubule organization and nucleation.

REFERENCES

- Murphy, S.M., Urbani, L. and Stearns, T. 1998. The mammalian γ -tubulin complex contains homologues of the yeast spindle pole body components spc97p and spc98p. *J. Cell Biol.* 141: 663-674.
- Fava, F., Raynaud-Messina, B., Leung-Tack, J., Mazzolini, L., Li, M., Guillemot, J.C., Cachot, D., Tollon, Y., Ferrara, P. and Wright, M. 1999. Human 76p: A new member of the γ tubulin-associated protein family. *J. Cell Biol.* 147: 857-868.
- Hillman, R.T., Green, R.E. and Brenner, S.E. 2004. An unappreciated role for RNA surveillance. *Genome Biol.* 5: R8.
- Rush, J., Moritz, A., Lee, K.A., Guo, A., Goss, V.L., Spek, E.J., Zhang, H., Zha, X.M., Polakiewicz, R.D. and Comb, M.J. 2005. Immunoaffinity profiling of tyrosine phosphorylation in cancer cells. *Nat. Biotechnol.* 23: 94-101.
- Delgehr, N., Sillibourne, J. and Bornens, M. 2005. Microtubule nucleation and anchoring at the centrosome are independent processes linked by Ninein function. *J. Cell Sci.* 118: 1565-1575.

CHROMOSOMAL LOCATION

Genetic locus: TUBGCP4 (human) mapping to 15q15.3; Tubgcp4 (mouse) mapping to 2 E5.

SOURCE

GCP4 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GCP4 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-54001 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

GCP4 (C-18) is recommended for detection of γ -tubulin complex component 4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 1:30-1:3000).

GCP4 (C-18) is also recommended for detection of γ -tubulin complex component 4 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for GCP4 siRNA (h): sc-77350, GCP4 siRNA (m): sc-77351, GCP4 shRNA Plasmid (h): sc-77350-SH, GCP4 shRNA Plasmid (m): sc-77351-SH, GCP4 shRNA (h) Lentiviral Particles: sc-77350-V and GCP4 shRNA (m) Lentiviral Particles: sc-77351-V.

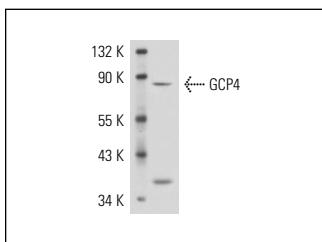
Molecular Weight of GCP4: 76 kDa.

Positive Controls: HCT-116 whole cell lysate: sc-364175 or NIH/3T3 whole cell lysate: sc-2210.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



GCP4 (C-18): sc-54001. Western blot analysis of GCP4 expression in HCT-116 whole cell lysate.

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.