SANTA CRUZ BIOTECHNOLOGY, INC.

GCP6 (H-299): sc-67255

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The Power to Question

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. GCP6 (γ-tubulin complex component 6), also known as TUBGCP6, localizes to the centrosome and is a ubiquitously expressed 1,819 amino acid member of the γ-tubulin complex. Unlike GCP3 and GCP2, GCP6 is not well conserved among eukaryotes. Three isoforms of GCP6 exist due to alternative splicing events.

REFERENCES

1. Murphy, S.M., et al. 1998. The mammalian γ-tubulin complex contains homologues of the yeast spindle pole body components spc97p and spc98p. J. Cell Biol. 141: 663-674.
2. Fava, F., et al. 1999. Human 76p: A new member of the γ-tubulin-associated protein family. J. Cell Biol. 147: 857-868.
3. Hillman, R.T., et al. 2004. An unappreciated role for RNA surveillance. Genome Biol. 5: R8.
4. Rush, J., et al. 2005. Immunoaffinity profiling of tyrosine phosphorylation in cancer cells. Nat. Biotechnol. 23: 94-101.
5. Delgehyr, N., et al. 2005. Microtubule nucleation and anchoring at the centrosome are independent processes linked by ninein function. J. Cell Sci. 118: 1565-1575.
6. Lüders, J., et al. 2006. GCP-WD is a γ-tubulin targeting factor required for centrosomal and chromatin-mediated microtubule nucleation. Nat. Cell Biol. 8: 137-147.
7. Arbildua, J.J., et al. 2006. Fluorescence resonance energy transfer and molecular modeling studies on 4',6-diamidino-2-phenylindole (DAPI) complexes with tubulin. Protein Sci. 15: 410-419.
8. Van Thuan, N., et al. 2006. Donor centrosome regulation of initial spindle formation in mouse somatic cell nuclear transfer: roles of γ-tubulin and nuclear mitotic apparatus protein 1. Biol. Reprod. 74: 777-787.

CHROMOSOMAL LOCATION

Genetic locus: TUBGCP6 (human) mapping to 22q13.33; Tubgcp6 (mouse) mapping to 15 A1.

SOURCE

GCP6 (H-299) is a rabbit polyclonal antibody raised against amino acids 268-566 mapping within an internal region of GCP6 of human origin.

PRODUCT

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

APPLICATIONS

GCP6 (H-299) is recommended for detection of γ-tubulin complex component 6 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GCP6 (H-299) is also recommended for detection of γ-tubulin complex component 6 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GCP6 siRNA (h): sc-77347, GCP6 shRNA Plasmid (h): sc-77347-SH and GCP6 shRNA (h) Lentiviral Particles: sc-77347-V.

Molecular Weight of GCP6: 200 kDa.

Positive Controls: HEK293 whole cell lysate: sc-45136.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

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.