SANTA CRUZ BIOTECHNOLOGY, INC.

GCP6 (E-18): sc-54009



BACKGROUND

The γ -Tubulin complex is composed of γ Tubulin and the γ -Tubulin complexassociated proteins GCP2, GCP3, GCP4, GCP5 and GCP6, all of which are essential components of microtubule organizing centers. y-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 y-Tubulin complex. Unlike GCP3 and GCP2, GCP6 is not well conserved among eukaryotes. Three isoforms of GCP6 exist due to alternative splicing events.

REFERENCES

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- 3. Murphy, S.M., et al. 2001. GCP5 and GCP6: two new members of the human y-tubulin complex. Mol. Biol. Cell 12: 3340-3352.
- 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. 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.
- 7. Stirling, P.C., et al. 2006. PhLP3 modulates CCT-mediated actin and tubulin folding via ternary complexes with substrates. J. Biol. Chem. 281: 7012-7021.
- 8. Van Thuan, N., et al. 2006. Donor centrosome regulation of initial spindle formation in mouse somatic cell nuclear transfer: roles of y-tubulin and nuclear mitotic apparatus protein 1. Biol. Reprod. 74: 777-787.
- 9. Lüders, J., et al. 2006. GCP-WD is a y Tubulin targeting factor required for centrosomal and chromatin-mediated microtubule nucleation. Nat. Cell. Biol. 8: 137-147.

CHROMOSOMAL LOCATION

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

SOURCE

GCP6 (E-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GCP6 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-54009 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GCP6 (E-18) is recommended for detection of GCP6 of mouse, rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GCP6 (E-18) is also recommended for detection of GCP6 in additional species, including equine, canine, bovine, porcine and avian.

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.

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.

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.