SANTA CRUZ BIOTECHNOLOGY, INC.

β Tubulin (H-235): sc-9104

BACKGROUND

Tubulin is a major cytoskeleton component that has five distinct forms, designated α, β, γ, δ and ε tubulin. α and β Tubulins form heterodimers which multimerize to form a microtubule filament. Multiple β Tubulin isoforms (β1, β2, β3, β4, β5, β6 and β8) have been characterized and are expressed in mammalian tissues. β1 and β4 are present throughout the cytosol, β2 is present in the nuclei and nucleoplasm, and β3 is a neuron-specific cytoskeletal protein. γ Tubulin forms the gammasome, which is required for nucleating microtubule filaments at the centrosome. Both δ Tubulin and ε Tubulin are associated with the centrosome. δ Tubulin is a homolog of the *Chlamydomonas* δ Tubulin Uni3 and is found in association with the centrioles, whereas ε Tubulin localizes to the pericentriolar material. ε Tubulin exhibits a cell cycle-specific pattern of localization; first associating with only the older of the centrosomes in a newly duplicated pair, and later associating with both centrosomes.

SOURCE

β Tubulin (H-235) is a rabbit polyclonal antibody raised against amino acids 210-444 of β-Tubulin 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.

Available as agarose conjugate for immunoprecipitation, sc-9104 AC, 500 µg/ 0.25 ml agarose in 1 ml; as fluorescein (sc-9104 FITC) or rhodamine (sc-9104 TRITC) conjugates for immunofluorescence, 200 µg/ml; and as Alexa Fluor® 405 (sc-9104 AF405), Alexa Fluor® 488 (sc-9104 AF488) or Alexa Fluor® 647 (sc-9104 AF647) conjugates for immunofluorescence; 100 µg/2 ml.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

β Tubulin (H-235) is recommended for detection of β Tubulin of mouse, rat, human, *Drosophila melanogaster, Xenopus laevis,* zebrafish and *Caenorhabditis elegans* 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), 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).

β Tubulin (H-235) (H-235) is also recommended for detection of β Tubulin in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of β Tubulin: 55 kDa.

Positive Controls: β2C Tubulin (m2): 293T Lysate: sc-126330, K-562 whole cell lysate: sc-2203 or HeLa whole cell lysate: sc-2200.

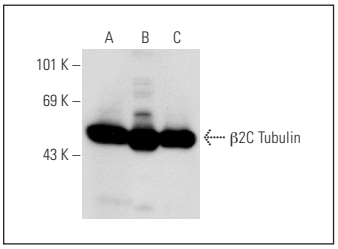
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of
For research use only, not for use in diagnostic procedures.

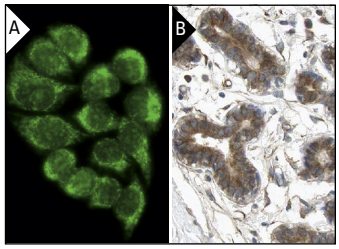
RESEARCH USE

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

DATA



β Tubulin (H-235): sc-9104. Western blot analysis of β2C Tubulin expression in non-transfected 293T: sc-117752 (**A**), mouse β2C Tubulin transfected 293T: sc-126330 (**B**) and K-562 (**C**) whole cell lysates.



β Tubulin (H-235): sc-9104. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic staining of glandular cells at high magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Lu, Y., et al. 2001. Disruption of the Cockayne syndrome B gene impairs spontaneous tumorigenesis in cancer-predisposed Ink4α/ARF knockout mice. Mol. Cell. Biol. 21: 1810-1818.
2. Fang, E.F., et al. 2012. *Momordica charantia* lectin, a type II ribosome inactivating protein, exhibits antitumor activity toward human nasopharyngeal carcinoma cells *in vitro* and *in vivo*. Cancer Prev. Res. 5: 109-121.
3. Freudenberg, J.M., et al. 2012. Acute depletion of Tet1-dependent 5-hydroxymethylcytosine levels impairs LIF/Stat3 signaling and results in loss of embryonic stem cell identity. Nucleic Acids Res. 40: 3364-3377.
4. Carrassa, L., et al. 2012. Combined inhibition of Chk1 and Wee1: *in vitro* synergistic effect translates to tumor growth inhibition *in vivo*. Cell Cycle 11: 2507-2517.
5. Gimigliano, A., et al. 2012. Proteomic profile identifies dysregulated pathways in Cornelia de Lange syndrome cells with distinct mutations in SMC1A and SMC3 genes. J. Proteome Res. 11: 6111-6123.
6. Moreno-Igoa, M., et al. 2012. Non-viral gene delivery of the GDNF, either alone or fused to the C-fragment of tetanus toxin protein, prolongs survival in a mouse ALS model. Restor. Neurol. Neurosci. 30: 69-80.
7. Wasilewski, M., et al. 2012. Optic atrophy 1-dependent mitochondrial remodeling controls steroidogenesis in trophoblasts. Curr. Biol. 10: 1228-1234.