# SANTA CRUZ BIOTECHNOLOGY, INC.

# β Tubulin (37): sc-101527



## BACKGROUND

Tubulin is a major cytoskeleton component that has five distinct forms, designated  $\alpha$ ,  $\beta$ ,  $\gamma$ ,  $\delta$  and  $\varepsilon$  Tubulin.  $\alpha$  and  $\beta$  Tubulins form heterodimers which multimerize to form a microtubule filament. Multiple  $\beta$  Tubulin isoforms ( $\beta$ 1,  $\beta$ 2,  $\beta$ 3,  $\beta$ 4,  $\beta$ 5,  $\beta$ 6 and  $\beta$ 8) have been characterized and are expressed in mammalian tissues.  $\beta$ 1 and  $\beta$ 4 are present throughout the cytosol,  $\beta$ 2 is present in the nuclei and nucleoplasm, and  $\beta$ 3 is a neuron-specific cytoskeletal protein.  $\gamma$  Tubulin forms the gammasome, which is required for nucleating microtubule filaments at the centrosome. Both  $\delta$  Tubulin and  $\varepsilon$  Tubulin are associated with the centrosome.  $\delta$  Tubulin is a homolog of the *Chlamydomonas*  $\delta$  Tubulin localizes to the pericentriolar material.  $\varepsilon$  Tubulin exhibits a cell cycle-specific pattern of localization; first associating with only the older of the centrosomes.

# SOURCE

 $\beta$  Tubulin (37) is a mouse monoclonal antibody raised against recombinant  $\beta$  Tubulin of human origin.

### PRODUCT

Each vial contains 200  $\mu g$  lgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## **APPLICATIONS**

 $\beta$  Tubulin (37) is recommended for detection of  $\beta$  Tubulin 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), 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).

Molecular Weight of  $\beta$  Tubulin: 55 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, A-431 whole cell lysate: sc-2201 or BJAB whole cell lysate: sc-2207.

# **RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgG $\kappa$  BP-HRP: sc-516102 or m-lgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>TM</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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-lgG $\kappa$  BP-FITC: sc-516140 or m-lgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-lgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

### **RESEARCH USE**

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

## STORAGE

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

### DATA



 $\beta$  Tubulin (37): sc-101527. Western blot analysis of  $\beta$  Tubulin expression in K-562 (A), A-431 (B), HeLa (C), BJAB (D), HEL 92.1.7 (E) and Ramos (F) whole cell lysates.



 $\beta$  Tubulin (37): sc-101527. Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue (**A**) and human epididymis tissue (**B**) showing cytoplasmic and membrane staining of glandular cells. Blocked with 0.25X UltraCruz<sup>®</sup> Blocking Reagent: sc-516214. Detected with m-IgGk BP-8: sc-516124 and ImmunoCruz<sup>®</sup> ABC K1: sc-516214.

#### **SELECT PRODUCT CITATIONS**

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- Rotoli, D., et al. 2017. Alterations in IQGAP1 expression and localization in colorectal carcinoma and liver metastases following oxaliplatin-based chemotherapy. Oncol. Lett. 14: 2621-2628.
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- Ma, B., et al. 2019. Expression of E-cadherin and specific CXCR3 isoforms impact each other in prostate cancer. Cell Commun. Signal. 17: 164.
- Guo, X., et al. 2020. Developmental programming: prenatal testosterone induced changes in epigenetic modulators and gene expression in metabolic tissues of female sheep. Mol. Cell. Endocrinol. 514: 110913.
- 6. Gopalakrishnan, S., et al. 2021. SSTP1, a host defense peptide, exploits the immunomodulatory IL6 pathway to induce apoptosis in cancer cells. Front. Immunol. 12: 740620.
- Bae, E., et al. 2022. Integrin α3β1 promotes vessel formation of glioblastoma-associated endothelial cells through calcium-mediated macropinocytosis and lysosomal exocytosis. Nat. Commun. 13: 4268.
- Caldeira, I.D.S., et al. 2024. Antiapoptotic and prometastatic roles of cytokine FAM3B in triple-negative breast cancer. Clin. Breast Cancer 24: e633-e644.e2.



See  $\beta$  **Tubulin (D-10): sc-5274** for  $\beta$  Tubulin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor<sup>®</sup> 488, 546, 594, 647, 680 and 790.