

# β Tubulin (JDR.3B8): sc-58882

## BACKGROUND

Tubulin is a major cytoskeleton component that has five distinct forms, designated  $\alpha$ ,  $\beta$ ,  $\gamma$ ,  $\delta$  and  $\epsilon$  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  $\epsilon$  Tubulin are associated with the centrosome.  $\delta$  Tubulin is a homolog of the *Chlamydomonas*  $\delta$  Tubulin Uni3 and is found in association with the centrioles, whereas  $\epsilon$  Tubulin localizes to the pericentriolar material.  $\epsilon$  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

$\beta$  Tubulin (JDR.3B8) is a mouse monoclonal antibody raised against the C-terminus of  $\beta$  Tubulin of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

$\beta$  Tubulin (JDR.3B8) is recommended for detection of  $\beta$ 1 and  $\beta$ 2 Tubulin of mouse, rat, human, bovine and porcine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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

Positive Controls: HeLa whole cell lysate: sc-2200, KNRK whole cell lysate: sc-2214 or NIH/3T3 whole cell lysate: sc-2210.

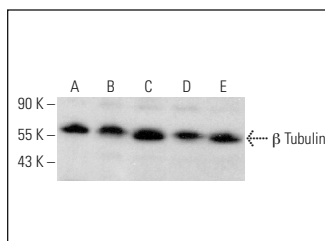
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® 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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

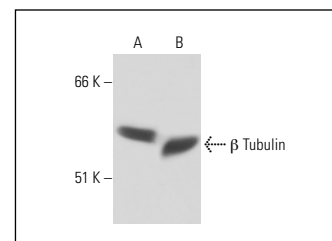
## RESEARCH USE

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

## DATA



$\beta$  Tubulin (JDR.3B8): sc-58882. Western blot analysis of  $\beta$  Tubulin expression in HeLa (A), HEL 92.1.7 (B), CCRF-CEM (C), K-562 (D) and MEG-01 (E) whole cell lysates.



$\beta$  Tubulin (JDR.3B8): sc-58882. Western blot analysis of  $\beta$  Tubulin expression in NIH/3T3 (A) and KNRK (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Yang, P.Y., et al. 2010. Activity-based proteome profiling of potential cellular targets of orlistat—an FDA-approved drug with anti-tumor activities. *J. Am. Chem. Soc.* 132: 656-666.
- Liu, X.H., et al. 2012. Leonurine attenuates lipopolysaccharide-induced inflammatory responses in human endothelial cells: involvement of reactive oxygen species and NF $\kappa$ B pathways. *Eur. J. Pharmacol.* 680: 108-114.
- Preitner, N., et al. 2014. APC is an RNA-binding protein, and its interactome provides a link to neural development and microtubule assembly. *Cell* 158: 368-382.
- Madathan Kandy, S., et al. 2015. Overexpression and lack of copy number variation in the BMI-1 gene in human glioma. *Oncol. Lett.* 10: 3318-3322.
- Rasmussen, G.B., et al. 2015. Immunohistochemical biomarkers and FDG uptake on PET/CT in head and neck squamous cell carcinoma. *Acta Oncol.* 54: 1408-1415.
- Lavanya, C., et al. 2016. RNA interference mediated downregulation of human telomerase reverse transcriptase (hTERT) in LN18 cells. *Cytotechnology* 68: 2311-2321.
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- Saisawang, C., et al. 2019. Glutathione transferase  $\omega$  1-1 (GSTO1-1) modulates Akt and MEK1/2 signaling in human neuroblastoma cell SH-SY5Y. *Proteins* 87: 588-595.
- Kumar, R., et al. 2020. Berberine induces dose-dependent quiescence and apoptosis in A549 cancer cells by modulating cell cyclins and inflammation independent of mTOR pathway. *Life Sci.* 244: 117346.

## CONJUGATES

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