

# β Tubulin (D-10): sc-5274

## 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 (D-10) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 210-444 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.

$\beta$  Tubulin (D-10) is available conjugated to agarose (sc-5274 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-5274 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-5274 PE), fluorescein (sc-5274 FITC), Alexa Fluor® 488 (sc-5274 AF488), Alexa Fluor® 546 (sc-5274 AF546), Alexa Fluor® 594 (sc-5274 AF594) or Alexa Fluor® 647 (sc-5274 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-5274 AF680) or Alexa Fluor® 790 (sc-5274 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition,  $\beta$  Tubulin (D-10) is available conjugated to biotin (sc-5274 B), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA.

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## APPLICATIONS

$\beta$  Tubulin (D-10) 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  $\mu$ g per 100-500  $\mu$ g 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: U-2 OS cell lysate: sc-2295, K-562 whole cell lysate: sc-2203 or BJAB whole cell lysate: sc-2207.

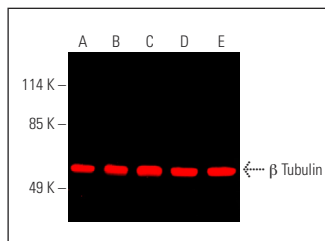
## RESEARCH USE

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

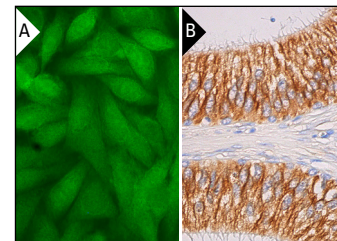
## STORAGE

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

## DATA



$\beta$  Tubulin (D-10) Alexa Fluor® 790: sc-5274 AF790. Direct near-infrared western blot analysis of  $\beta$  Tubulin expression in A-431 (A), BJAB (B), K-562 (C), U-251-MG (D) and U-2 OS (E) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.



$\beta$  Tubulin (D-10) Alexa Fluor® 488: sc-5274 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing membrane localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (A).  $\beta$  Tubulin (D-10) HRP: sc-5274 HRP. Direct immunoperoxidase staining of formalin fixed, paraffin-embedded human epididymis tissue showing cytoplasmic and membrane staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

- Vasseur, S., et al. 2002. p8-deficient fibroblasts grow more rapidly and are more resistant to adriamycin-induced apoptosis. *Oncogene* 21: 1685-1694.
- Noessner, E., et al. 2002. Tumor-derived heat shock protein 70 peptide complexes are cross-presented by human dendritic cells. *J. Immunol.* 169: 5424-5432.
- Rapizzi, E., et al. 2002. Recombinant expression of the voltage-dependent anion channel enhances the transfer of Ca<sup>2+</sup> microdomains to mitochondria. *J. Cell Biol.* 159: 613-624.
- Vasseur, S., et al. 2002. p8 is critical for tumour development induced by RasV12 mutated protein and E1A oncogene. *EMBO Rep.* 3: 165-170.
- Deroo, B.J., et al. 2002. Proteasomal inhibition enhances glucocorticoid receptor transactivation and alters its subnuclear trafficking. *Mol. Cell. Biol.* 22: 4113-4123.
- Fu, L., et al. 2019. Up-regulation of FOXD1 by YAP alleviates senescence and osteoarthritis. *PLoS Biol.* 17: e3000201.
- Mohammad, H., et al. 2019. Perampanel but not amantadine prevents behavioral alterations and epileptogenesis in pilocarpine rat model of status epilepticus. *Mol. Neurobiol.* 56: 2508-2523.
- Njah, K., et al. 2019. A role of agrin in maintaining the stability of vascular endothelial growth factor receptor-2 during tumor angiogenesis. *Cell Rep.* 28: 949-965.
- Roake, C.M., et al. 2019. Disruption of telomerase RNA maturation kinetics precipitates disease. *Mol. Cell* 74: 688-700.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.