

# $\beta$ 3 Tubulin (AA10): sc-80016

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: TUBB3 (human) mapping to 16q24.3; Tubb3 (mouse) mapping to 8 E1.

## SOURCE

$\beta$ 3 Tubulin (AA10) is a mouse monoclonal antibody raised against amino acids 436-450 of  $\beta$ 3 Tubulin of rat origin.

## PRODUCT

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

$\beta$ 3 Tubulin (AA10) is available conjugated to agarose (sc-80016 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-80016 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-80016 PE), fluorescein (sc-80016 FITC), Alexa Fluor<sup>®</sup> 488 (sc-80016 AF488), Alexa Fluor<sup>®</sup> 546 (sc-80016 AF546), Alexa Fluor<sup>®</sup> 594 (sc-80016 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-80016 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-80016 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-80016 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

$\beta$ 3 Tubulin (AA10) is recommended for detection of  $\beta$ 3 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for  $\beta$ 3 Tubulin siRNA (h): sc-105009,  $\beta$ 3 Tubulin siRNA (m): sc-108023,  $\beta$ 3 Tubulin shRNA Plasmid (h): sc-105009-SH,  $\beta$ 3 Tubulin shRNA Plasmid (m): sc-108023-SH,  $\beta$ 3 Tubulin shRNA (h) Lentiviral Particles: sc-105009-V and  $\beta$ 3 Tubulin shRNA (m) Lentiviral Particles: sc-108023-V.

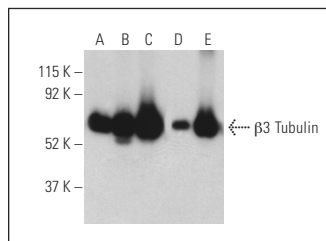
Molecular Weight of  $\beta$ 3 Tubulin: 55 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, PC-12 cell lysate: sc-2250 or F9 cell lysate: sc-2245.

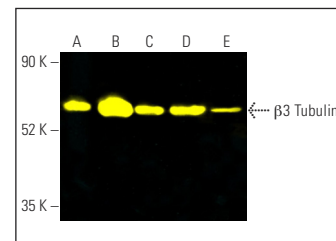
## STORAGE

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

## DATA



$\beta$ 3 Tubulin (AA10): sc-80016. Western blot analysis of  $\beta$ 3 Tubulin expression in BJAB (A), A2058 (B), SK-N-SH (C), K-562 (D) and F9 (E) whole cell lysates. Detection reagent used: m-IgG<sub>2a</sub> BP-HRP: sc-542731.



$\beta$ 3 Tubulin (AA10): sc-80016. Fluorescent western blot analysis of  $\beta$ 3 Tubulin expression in A2058 (A), SK-N-SH (B), BJAB (C), F9 (D) and PC-12 (E) whole cell lysates. Blocked with UltraCruz<sup>®</sup> Blocking Reagent: sc-516214. Detection reagent used: m-IgG<sub>2a</sub> BP-CFL 488: sc-542735.

## SELECT PRODUCT CITATIONS

- Yu, H., et al. 2011. Lentiviral gene transfer into the dorsal root ganglion of adult rats. *Mol. Pain* 7: 63.
- Xiang, H., et al. 2018. Glial fibrillary acidic protein promoter determines transgene expression in satellite glial cells following intraganglionic adeno-associated virus delivery in adult rats. *J. Neurosci. Res.* 96: 436-448.
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- Cornejo, V.H., et al. 2020. Non-conventional axonal organelles control TRPM8 ion channel trafficking and peripheral cold sensing. *Cell Rep.* 30: 4505-4517.e5.
- Li, C., et al. 2021. Comprehensive profiling reveals distinct microenvironment and metabolism characterization of lung adenocarcinoma. *Front. Genet.* 12: 619821.
- Dentoni, G., et al. 2022. Mitochondrial alterations in neurons derived from the murine AppNL-F knock-in model of Alzheimer's disease. *J. Alzheimers Dis.* 90: 565-583.
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- Carniglia, L., et al. 2024. Melanocortin-receptor 4 activation modulates proliferation and differentiation of rat postnatal hippocampal neural precursor cells. *Neuropharmacology* 257: 110058.

## RESEARCH USE

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

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