

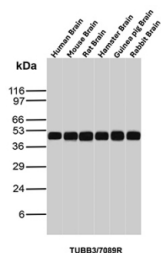
Beta Tubulin Antibody / Neuronal and Tumor Marker Antibody [clone TUBB3/7089R] (V9457)

Catalog No.	Formulation	Size
V9457-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V9457-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V9457SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

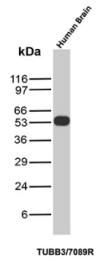
Recombinant **RABBIT MONOCLONAL**

[Bulk quote request](#)

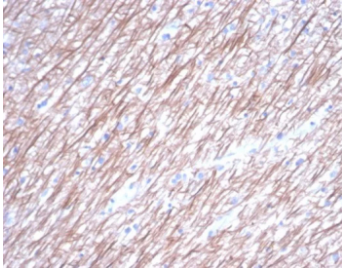
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat, Rabbit, Hamster, Guinea pig
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	TUBB3/7089R
Purity	Protein A/G affinity
UniProt	Q13509
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml (Human) Western Blot : 2-4ug/ml (Human/Mouse/Rat/Rabbit/Hamster/Guinea pig)
Limitations	This Beta Tubulin Antibody / Neuronal and Tumor Marker Antibody is available for research use only.



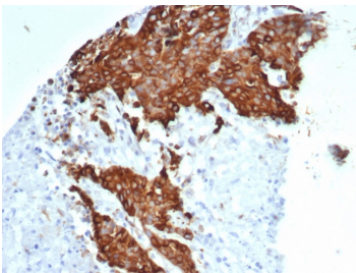
Beta Tubulin Antibody Cross-Species Brain WB. Western blot analysis of Beta III tubulin (TUBB3) expression across brain lysates from multiple species using Beta Tubulin antibody clone TUBB3/7089R. Lane 1: human brain lysate, Lane 2: mouse brain lysate, Lane 3: rat brain lysate, Lane 4: hamster brain lysate, Lane 5: guinea pig brain lysate, Lane 6: rabbit brain lysate. A band is detected at approximately 50-55 kDa in all samples, consistent with the predicted molecular weight of TUBB3. The consistent signal across species supports use in comparative neural tissue studies.



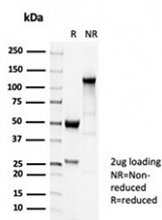
Beta Tubulin Antibody Human Brain Tissue WB. Western blot analysis of Beta III tubulin (TUBB3) expression in human brain tissue lysate using Beta Tubulin antibody clone TUBB3/7089R. Lane 1: human brain lysate. A band is detected at approximately 50–55 kDa, consistent with the predicted molecular weight of TUBB3, supporting reliable detection in neural samples.



Beta Tubulin Antibody Brain IHC. Immunohistochemical analysis of Beta III tubulin (TUBB3) in formalin-fixed, paraffin-embedded human brain tissue using Beta Tubulin antibody clone TUBB3/7089R. Strong cytoplasmic staining is observed in neurons and neuropil, consistent with the localization of TUBB3 within neuronal microtubules. The staining pattern highlights neuronal processes and supports its use as a neural marker.



Beta Tubulin Antibody Ovarian Carcinoma IHC. Immunohistochemical analysis of Beta III tubulin (TUBB3) in formalin-fixed, paraffin-embedded human ovarian carcinoma using Beta Tubulin antibody clone TUBB3/7089R. Strong cytoplasmic staining is observed in tumor epithelial cells, consistent with TUBB3 expression in cancers with altered microtubule dynamics. The staining supports its use in studies of tumor phenotype and cytoskeletal organization.



SDS-PAGE analysis of purified, BSA-free recombinant Beta Tubulin antibody (clone TUBB3/7089R) as confirmation of integrity and purity.

Description

Tubulin beta 3 class III (TUBB3), commonly referred to as Beta III tubulin or Beta tubulin in neuronal contexts, is a specialized microtubule protein that serves as a core structural component of the cytoskeleton in differentiated neurons. TUBB3 is predominantly localized in the cytoplasm, where it incorporates into microtubules that support axonal transport, neurite extension, and maintenance of neuronal morphology. These microtubule networks are essential for intracellular trafficking and structural integrity, particularly in highly polarized neuronal cells. The Beta Tubulin Antibody / Neuronal and Tumor Marker Antibody is designed to detect this highly conserved cytoskeletal protein, enabling analysis of neuronal architecture as well as cytoskeletal features in tumor tissues.

Beta tubulin antibody, also referred to as TUBB3 antibody and Beta III tubulin antibody in the literature, recognizes a protein that is strongly enriched in neurons of the central and peripheral nervous systems, with minimal expression in most non-neuronal tissues under normal conditions. Western blot analysis demonstrates a clear and reproducible band at approximately 50–55 kDa across brain lysates from multiple species, including human, mouse, rat, hamster, guinea pig, and rabbit, consistent with the predicted molecular weight of TUBB3. The uniform detection across species highlights the high degree of sequence conservation and supports the use of this antibody for cross-species neural studies and comparative validation workflows.

Structurally, TUBB3 forms heterodimers with alpha-tubulin to assemble into microtubules, which provide the framework for cell shape, polarity, and intracellular transport. The Beta III isoform is distinguished by its neuron-preferential expression and its role in regulating dynamic microtubule behavior required for neurite outgrowth and synaptic organization. Post-translational modifications such as acetylation, detyrosination, and polyglutamylation further modulate microtubule stability and function, allowing fine control of cytoskeletal dynamics in response to cellular signaling.

Functionally, TUBB3 is critical for neuronal development, including neuronal migration, axon guidance, and synapse formation. Its expression is upregulated during neuronal differentiation and remains elevated in mature neurons, reflecting its importance in maintaining neuronal structure and connectivity. In brain tissue, TUBB3 is prominently expressed in neuronal cell bodies and processes, producing a characteristic cytoplasmic staining pattern that mirrors the underlying microtubule network and facilitates visualization of neuronal morphology.

In addition to its role in normal neural physiology, TUBB3 has emerged as a relevant marker in cancer biology. Aberrant or elevated expression of TUBB3 has been reported in multiple malignancies, including ovarian carcinoma, where it is associated with altered microtubule dynamics and tumor cell phenotype. Increased TUBB3 expression has also been linked to resistance to microtubule-targeting chemotherapeutic agents, underscoring its importance in studies of tumor progression and therapeutic response. Detection of Beta III tubulin in tumor epithelial cells provides insight into cytoskeletal organization and differentiation status in cancer tissues.

Immunohistochemical analysis demonstrates strong cytoplasmic staining in neurons and neuropil in human brain tissue, consistent with TUBB3 localization within neuronal microtubules, while staining in ovarian carcinoma highlights tumor epithelial cells with robust cytoplasmic signal. These complementary patterns support the use of this antibody in both neural and tumor tissue analysis. Clone TUBB3/7089R is a recombinant rabbit monoclonal antibody designed to detect TUBB3 with high specificity, providing a reliable tool for western blot and immunohistochemical studies of neuronal biology, cytoskeletal organization, and tumor-associated microtubule dynamics.

This antibody is part of a [broader antibody panel](#) offered by NSJ Bioreagents.

Application Notes

Optimal dilution of the Beta Tubulin Antibody / Neuronal and Tumor Marker Antibody should be determined by the researcher.

Immunogen

A portion of amino acids 437-450 from the human protein was used as the immunogen for the recombinant Beta Tubulin antibody.

Storage

Aliquot the Beta Tubulin antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Beta tubulin antibody, TUBB3 antibody, Beta III tubulin antibody, TUJ1 antibody, Beta tubulin IHC antibody

