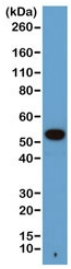
Recombinant Alpha Tubulin Antibody / TUBA1B (Loading Control) [clone RM113] (R20196)

Catalog No.	Formulation	Size
R20196-0.1ML	Antibody in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ul

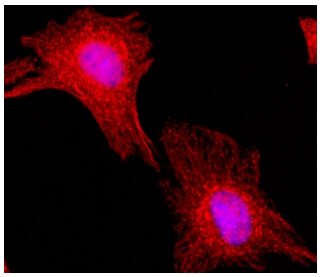
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	All Species
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM113
Purity	Protein A purified from animal origin-free supernatant
UniProt	P68363
Gene ID	10376
Applications	Western Blot : 1:1000 Immunofluorescence/Immunocytochemistry : 1:200
Limitations	This recombinant Alpha Tubulin antibody is available for research use only.



Western blot of human A431 cells with recombinant Alpha Tubulin antibody at 1:1000. Predicted molecular weight ~50 kDa.



ICC staining of human HeLa cells using the recombinant Alpha Tubulin antibody at 1:200 (red) and nuclei with DAPI (blue).

Description

The Recombinant Alpha Tubulin antibody is engineered as a recombinant reagent that specifically recognizes alpha tubulin, a core component of the microtubule cytoskeleton. Alpha tubulin, encoded by genes such as TUBA1B, forms obligate heterodimers with beta tubulin to create the building blocks of microtubules. These dynamic polymers are essential for maintaining cell shape, intracellular trafficking, and chromosome segregation during mitosis. Because of its ubiquitous expression and structural importance, alpha tubulin is widely used as a loading control in western blotting and as a marker for cytoskeletal integrity in imaging studies. The Recombinant Alpha Tubulin antibody provides a highly reliable tool for these applications, with the consistency afforded by recombinant production.

Structurally, alpha tubulin is a globular protein that shares significant homology with beta tubulin, yet it possesses unique features required for heterodimer stability and microtubule nucleation. Together, alpha and beta tubulin assemble head-to-tail to generate protofilaments that align into the hollow cylindrical structure of microtubules. The dynamic polymerization and depolymerization of these filaments, regulated by GTP hydrolysis, allows microtubules to rapidly reorganize in response to cellular needs. The Recombinant Alpha Tubulin antibody targets conserved epitopes in alpha tubulin, enabling consistent detection across species and tissue types.

In experimental settings, the Recombinant Alpha Tubulin antibody is a cornerstone reagent in western blotting, where it is frequently used as a housekeeping control due to the stable and abundant expression of alpha tubulin. In immunofluorescence, it labels the filamentous microtubule network, revealing structural organization and cytoskeletal rearrangements during cell migration, differentiation, or division. In immunohistochemistry, the Recombinant Alpha Tubulin antibody highlights microtubule structures in tissue sections, aiding in the study of developmental processes and disease pathology. Recombinant design ensures consistent specificity and avoids the variability that can occur with hybridoma-derived antibodies.

This antibody is particularly important in studies of cell cycle progression, neuronal differentiation, and cancer biology, where microtubule dynamics are frequently disrupted. It also provides a benchmark for validating the effects of pharmacological agents such as taxanes or vinca alkaloids, which target microtubules to inhibit proliferation. Synonym terms such as recombinant TUBA1B antibody and recombinant alpha tubulin cytoskeletal antibody improve discoverability for researchers seeking reagents under alternate nomenclature.

By delivering validated and reproducible performance, the Recombinant Alpha Tubulin antibody supports accurate detection of a fundamental cytoskeletal protein across diverse applications. NSJ Bioreagents ensures strict quality control, providing investigators with a dependable reagent for use in western blotting, immunofluorescence, and tissue staining. With this tool, researchers can confidently explore cytoskeletal dynamics, cellular architecture, and the roles of microtubules in health and disease.

This recombinant Alpha Tubulin antibody reacts to a-Tubulin, including Tubulin alpha-1A chain and Tubulin alpha-1B chain.

Application Notes

The stated application concentrations are suggested starting points. Titration of the recombinant Alpha Tubulin antibody may be required due to differences in protocols and secondary/substrate sensitivity.

1. A pH6 Citrate buffer or pH9 Tris/EDTA buffer HIER step is recommended for testing of FFPE tissue sections.

Immunogen

A peptide corresponding to the C-terminus of a-Tubulin was used as the immunogen for this recombinant Alpha Tubulin antibody.

Storage

Store the recombinant Alpha Tubulin antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).