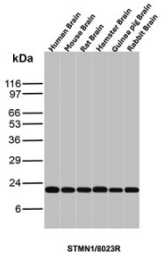
OP18 Antibody STMN1/8023R / Stathmin 1 Recombinant Monoclonal Antibody [clone STMN1/8023R] (V4674)

Catalog No.	Formulation	Size
V4674-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4674-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4674SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

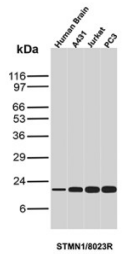
Recombinant RABBIT MONOCLONAL

Bulk quote request

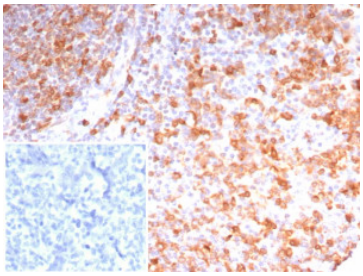
Species Reactivity	Human, Mouse, Rat, Hamster, Rabbit, Guinea pig
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	STMN1/8023R
Purity	Protein A/G affinity
UniProt	P16949
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT (Human) Western blot: 2-4ug/ml (Human/Mouse/Rat/Hamster/Rabbit/Guinea pig)
Limitations	This OP18 Antibody STMN1/8023R / Stathmin 1 Recombinant Monoclonal Antibody is available for research use only.



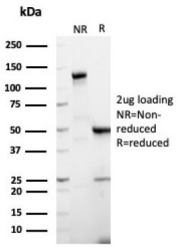
OP18 Antibody by WB in brain tissue from multiple species. Western blot analysis of brain lysates from different species using OP18 Antibody STMN1/8023R. Bands are detected near the expected molecular weight of stathmin 1, approximately 17 kDa.



OP18 Antibody by WB in human cell and tissue samples. Western blot analysis of human cell and tissue lysates using OP18 Antibody STMN1/8023R. The predicted molecular weight of stathmin 1 is approximately 17 kDa.



OP18 Antibody by IHC in human tonsil. Immunohistochemistry of FFPE human tonsil tissue using OP18 Antibody STMN1/8023R. Brown cytoplasmic immunoreactivity is visible in numerous cells throughout the tissue. The inset shows a negative control in which PBS replaced the primary antibody. Heat-induced epitope retrieval was performed by boiling sections in 10 mM Tris with 1 mM EDTA, pH 9, for 20 minutes.



OP18 Recombinant Monoclonal Antibody Purity by SDS-PAGE. SDS-PAGE analysis of purified OP18 Antibody STMN1/8023R under non-reducing (NR) and reducing (R) conditions, with 2 ug of antibody loaded per lane. The gel shows the intact antibody under non-reducing conditions and the expected heavy and light chains under reducing conditions.

Description

OP18 Antibody STMN1/8023R / Stathmin 1 Recombinant Monoclonal Antibody recognizes oncoprotein 18, a cytoplasmic phosphoprotein encoded by the STMN1 gene. Commonly known as stathmin 1, metablastin, or prosolin, this protein regulates microtubule dynamics through interactions with soluble tubulin. Its ability to influence microtubule assembly and disassembly contributes to cytoskeletal organization, cell division, and cellular migration. The designation oncoprotein 18 reflects its historical association with proliferating and transformed cells, although its functions extend well beyond cancer biology.

Stathmin 1 regulates microtubule behavior primarily through interactions with alpha/beta-tubulin heterodimers. By binding soluble tubulin, the protein can reduce the pool available for microtubule polymerization. It also promotes microtubule destabilization, allowing cells to adjust cytoskeletal organization in response to changing physiological requirements. These activities are particularly important during processes requiring rapid microtubule remodeling, including mitosis, cell migration, and differentiation.

The activity of oncoprotein 18 is controlled by phosphorylation at several regulatory serine residues, including Ser16, Ser25, Ser38, and Ser63. Phosphorylation generally reduces its microtubule-destabilizing activity, providing a mechanism through which intracellular signaling pathways influence cytoskeletal organization. Multiple protein kinases participate in this regulation, connecting stathmin function to mitogenic signaling, cell cycle progression, and cellular responses to environmental stimuli. Changes in phosphorylation can therefore influence the balance between soluble tubulin and assembled microtubules.

During cell division, microtubules reorganize into the mitotic spindle responsible for chromosome segregation. Stathmin 1 contributes to the regulation of spindle dynamics, while its phosphorylation helps coordinate microtubule stability with different stages of mitosis. The protein also participates in cellular migration, where microtubule remodeling influences cell polarity, shape, and movement. These functions connect stathmin activity to broader mechanisms of tissue development and cellular organization.

Elevated STMN1 expression has been reported in several malignancies, including breast, lung, colorectal, and liver cancers. Studies have investigated associations between stathmin abundance, tumor proliferation, invasive behavior, and sensitivity to microtubule-targeting therapies. These relationships are context-dependent and do not establish stathmin expression as an independent predictor of clinical outcome. NSJ Bioreagents offers this OP18 Antibody for research examining microtubule regulation, mitotic progression, cytoskeletal remodeling, and the signaling mechanisms associated with cellular proliferation.

Explore our STMN1 Antibody R31986 for additional research tools targeting stathmin 1, with validation data spanning Western blot, immunohistochemistry, immunofluorescence, and flow cytometry.

Application Notes

Optimal dilution of the OP18 Antibody STMN1/8023R / Stathmin 1 Recombinant Monoclonal Antibody should be determined by the researcher.

Immunogen

A recombinant fragment of human STMN1 protein was used as the immunogen for the Stathmin 1 / OP18 antibody.

Storage

Aliquot the Stathmin 1 / OP18 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Oncoprotein 18 antibody, Stathmin 1 antibody, STMN1 antibody, Metablastin antibody, Prosolin antibody

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