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Product Information

Monoclonal Anti-Spastin
Clone Sp 6C6
produced in mouse, purified immunoglobulin

Catalog Number **S7074**

Product Description

Monoclonal Anti-Spastin (mouse IgG2a isotype) is derived from the hybridoma Sp 6C6 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with recombinant human spastin (GeneID 6683).[1] The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2.

Monoclonal Anti-Spastin reacts with human, mouse, and rat spastin. The antibody may be used in various immunochemical techniques including ELISA, immunoblotting (~ 55 kDa), and immunocytochemistry.[1]

The formation of axonal branches is critical for the development of the nervous system. In order for these to form, the cytoskeleton within the parent axon must undergo dramatic remodeling. In particular, the parent axon is dominated by very long microtubules (MTs) that must be locally chopped into short highly mobile pieces that are able to move into the newly forming branch. Two molecules are known to participate in this process; P60-katanin and another microtubule-serving protein, spastin.[2-3] Spastin is a member of the AAA (ATPases associated with various cellular activities) family. Spastin gene has two start codons, resulting in a 616 amino acid protein called M1 and a slightly shorter protein called M85. Extensive evidence indicates that it interacts with and severes MTs.[1, 3-4] Endogenous spasin has been reported at regions of active MT regulation, including axonal branches, the distal axon and the midbody during cell division.[5-6] Consistent with this, in cells lacking spastin, MT disruption events that normally accompany abscission do not occur, and abscission fails. This is suggested to represent spastin-mediated MT-severing.[7] Moreover, mutations in the gene encoding spastin, are the most common cause of autosomal dominant hereditary spastic paraplegia, a genetic condition in which axons of the corticospinal tracts degenerate.[8] It has been suggested that spastin mutations produce the M1 protein (a 616 amino acid spastin form) which is cytotoxic, and not M85 (the shorter form).[9]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze at –20 °C in working aliquots. Repeated freezing and thawing, or storage in “frost-free” freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 0.5-1 μg/mL is recommended using HeLa total cell extract.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

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