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ProductInformation

Monoclonal Anti-Neurofilament 160
Clone RMO44
Purified Mouse Immunoglobulin

Product Code **N 2787**

Product Description

Monoclonal Anti- Neurofilament 160 (mouse IgG1 isotype) is derived from the hybridoma RMO44 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with purified mid-sized rat neurofilament (NF-M) subunit.[1] The isotype is determined using Sigma ImmunoType™ Kit (Product Code ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Product Code ISO-2).

Monoclonal Anti- Neurofilament 160 recognizes human,[2] rat,[1] mouse [2,3,4] and zebrafish[5] neurofilament 160 (approx. 160 kDa). The antibody recognizes a phosphate independent epitope in the rod (core) domain of NF-M.[2] The product is useful in ELISA,[1] immunoblotting[3,4] and immunohistochemistry.[2,5]

Intermediate filaments (IFs), having a diameter of 8-10 nm, are a distinct class of heterogeneous protein subunits apparent by both immunological and biochemical criteria. IFs are components of most eukaryotic cells and differ significantly from other cellular cytoskeletal elements, namely microtubules and microfilaments. Neurofilaments are one of the five major groups of IFs and are found predominantly in cells or tissues of neuronal origin.[6,7] They are composed of three major proteins of apparent molecular weights 68 kDa, 160 kDa and 200 kDa. Neurofilament proteins are synthesized in the neuronal perikarya, assembled to form filaments and then slowly transported within the axons towards the synaptic terminals. These molecules undergo post-translational modifications, which results in their heterogeneity including different levels of phosphorylation. The phosphorylation of neurofilament polypeptides has been suggested to modulate their function by influencing their interaction with cytoplasmic organelles.[6,7]

Reagent

The antibody is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: approx. 2 mg/ml.

Precautions and Disclaimer

Due to the sodium azide content a material safety sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. 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

A working concentration of 1-2 µg/ml is determined by immunoblotting, using extract of SHSy5y human neuroblastoma cells.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

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6. Trojanowski, J.Q., et al., Selective expression of epitopes in multiphosphorylation repeats of the high and middle molecular weight neurofilament proteins in Alzheimer neurofibrillary tangles., Ann. Med., **21**, 113-116 (1989).
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