

Product Information

Anti-Synemin (N-terminal)

produced in rabbit, IgG fraction of antiserum

Product Number **S9075**

Product Description

Anti-Synemin (N-terminal) is produced in rabbit using as the immunogen a synthetic peptide corresponding to a sequence at the N-terminal of human synemin (GenelD 23336) conjugated to KLH. The corresponding sequence is identical in human and mouse synemin H, L, and M isoforms and highly conserved (single amino acid substitution) in rat synemin. Whole antiserum is purified using protein A immobilized on agarose to provide the IgG fraction of antiserum.

Anti-Synemin (N-terminal) specifically recognizes human and rat synemin. The antibody may be used in various immunochemical techniques including immunoblotting (~170 kDa) and immunohistochemistry. Staining of the synemin band by immunoblotting is specifically inhibited by the synemin immunizing peptide.

Synemin (also known as desmuslin, DMN), is a unique type VI intermediate filament (IF) protein that like other IFs displays a complex tissue-specific expression pattern. The synemin gene encodes in humans three isoforms generated by alternative splicing, α -synemin (H, 180 kDa), β -synemin (M, 150 kDa) and L-synemin (L, 41 kDa) with overlapping distribution.¹⁻³ The three isoforms share the same head and rod domains but differ at their C-terminal.

Synemin interacts with major IF proteins including desmin, vimentin, and GFAP, and is thought to play an important role in maintaining structural integrity of the cell. Synemin isoforms have been shown to be expressed in muscle and brain, in astrocytes, glia and neuronal cells, as well as in the vascular system during development.³⁻⁶ β -synemin localizes to regions of high stress in human skeletal myofibers.

The interaction between IFs and adhesion molecules may serve as a mechanism to regulate cell- and tissue-specific attachment of the cytoskeleton to the membrane. In astrocytoma with migratory properties, synemin has been shown to contribute to the actin cytoskeleton dynamics.⁷ In rat and human liver tissue, synemin acts as a bridging protein between IFs and focal adhesions.⁸

Reagent

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

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at -20°C . For continuous use, the product may be stored at $2-8^{\circ}\text{C}$ for up to one month. For extended storage, freeze in working aliquots -20°C . 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 dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody dilution of 1:500-1:1000 is recommended using a rat skeletal muscle extract (S1 fraction).

Immunohistochemistry: a working antibody dilution of 1:150-1:300 is recommended using human skeletal muscle.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

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VS,ER,TD,KAA,PHC,MAM 06/19-1