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Product Information

Serine Palmitoyltransferase Blocking Peptide

Item No. 10006620

Sphingolipids play essential roles in various cellular events, including proliferation, differentiation, senescence, apoptosis, and inflammatory responses.[1] Serine palmitoyltransferase (SPT) is the initial and rate-limiting enzyme in the *de novo* sphingolipid biosynthesis, and thus regulates the level of sphingolipids in cells.[2] An immunohistochemical study revealed widespread distribution of the enzyme with pronounced expression in brain and digestive tract.[3] Two subunits, SPT1 and SPT2 at a stoichiometry of 1:1, are involved in the enzymatic activity of SPT.[4] Cayman Chemical's serine palmitoyltransferase polyclonal antibody recognizes SPT2, the long chain subunit of the enzyme. The antibody stains mainly cell nuclei and both cell nuclei and cytoplasm of a subpopulation of cells in formalin-fixed, paraffin-embedded rat brain tissue. The nuclear localization of SPT2 may suggest that SPT2 associates with another nuclear protein or is modified and transported to the nucleus.[2]

Laboratory Procedures

The SPT Blocking Peptide (human serine palmitoyltransferase subunit SPT2 amino acids 548-562) can be used in conjunction with Cayman's SPT Polyclonal Antibody (Item No. 10005260) to block protein-antibody complex formation during immunochemical analysis of SPT.

Store this peptide solution at -20°C. It will be stable for at least two years. To block antibody/protein complex formation, the following procedure is recommended:

1. Mix the SPT Polyclonal Antibody (Item No. 10005260) and blocking peptide together in a 1:2 (v/v) ratio in a microfuge tube. For example, mix 40 µl of antibody and 80 µl of peptide.*
2. Incubate for one hour at room temperature with occasional mixing prior to further dilution and application of the mixture to the immunoblot.
3. Dilute the mixture to the final working antibody concentration and apply to the slide or membrane as usual.

*This is a recommended mixture. The minimum amount of peptide needed for complete blocking has not been precisely determined and may vary depending on the sample being analyzed. The amount of peptide required may need to be increased if sufficient blocking does not occur.

References

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3. Batheja, A.D., Uhlinger, D.J., Carton, J.M., *et al.* Characterization of serine palmitoyltransferase in normal human tissues. *J. Histochem. Cytochem.* **51(5)**, 687-696 (2003).
4. Hanada, K., Hara, T., and Nishijima, M. Purification of the serine palmitoyltransferase complex responsible for sphingoid base synthesis by using affinity peptide chromatography techniques. *J. Biol. Chem.* **275(12)**, 8409-8415 (2000).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10006620

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