

Sphingosine Cyanine5

Catalog number: S-100C

Molecular Formula: C₅₀H₇₅N₄O₃

MW: 780.17 (free base)

CAS#: n/a

Excitation/Emission: 646/662 nm

Solubility: MeOH or DMSO, >1 mg/ml. Stock solutions can be further diluted into aqueous buffer.

Storage and Handling: Sphingosine-Cyanine5 is relatively stable at room temperature as a solid. It is best stored as a lyophilized solid at -20°C. Solutions/emulsions of sphingosines should be kept at -20°C. Storage in basic buffers (pH > 9.0) or acidic buffers (pH < 4.0) may cause decomposition. Protect from light.

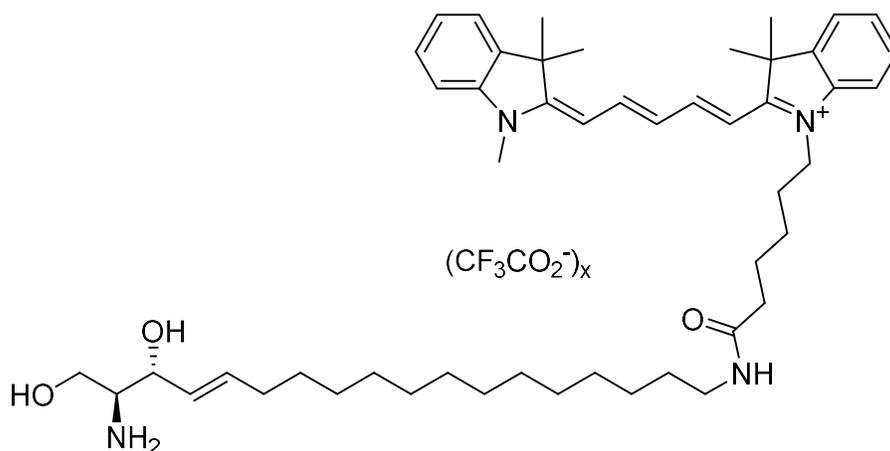
Background: Sphingosine is formed through ceramidase catalyzed hydrolysis of ceramide. It is a potent inhibitor of protein kinase C (IC₅₀ = 1-3 μM). Sphingosine is phosphorylated by sphingosine kinase to the bioactive lipid sphingosine 1-phosphate.

References: 1) Xiang, Y., G. Asmussen, et al. (2009). "Discovery of novel sphingosine kinase 1 inhibitors." *Bioorg Med Chem Lett* 19(21): 6119-21.

2) Caliper Life Sciences Application Note 205

3) Peest, U., S. C. Sensken, et al. (2008). "S1P-lyase independent clearance of extracellular sphingosine 1-phosphate after dephosphorylation and cellular uptake." *J Cell Biochem* 104(3): 756-72.

4) Meissner, A., J. Yang, et al. (2012). "Tumor Necrosis Factor-α-Mediated Downregulation of the Cystic Fibrosis Transmembrane Conductance Regulator Drives Pathological Sphingosine-1-Phosphate Signaling in a Mouse Model of Heart Failure." *Circulation* 125(22): 2739-2750.



Hazardous Properties and Cautions: The toxicological and pharmacological properties of this compound are not fully known. For further information see the MSDS on request. This product is manufactured and shipped only in small quantities, intended for research and development in a laboratory utilizing prudent procedures for handling chemicals of unknown toxicity, under the supervision of persons technically qualified to evaluate potential risks and authorized to enforce appropriate health and safety measures. As with all research chemicals, precautions should be taken to avoid unnecessary exposures or risks.

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Technical Data Sheet, Rev 2, 5/13/24– **For research use only.** Not intended for diagnostic or therapeutic use.