

3- α -Aminocholestane (3AC)

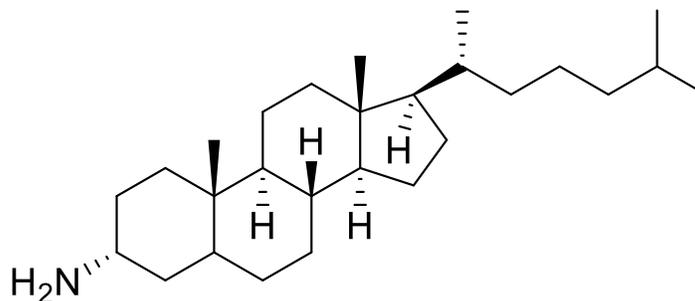
Catalog number: B-0341

Molecular Formula: C₂₇H₄₉N

MW: 387.68

CAS: 2206-20-4

Solubility: EtOH 5 mg/mL



Storage and Handling: Store dry at 4 °C. Stock solutions should be stored frozen (-20 °C or below).

Background: SH2-Domain containing inositol 5-phosphatases (SHIP1 & SHIP2) dephosphorylate the 5-position of PI(3,4,5)P₃ generating PI(3,4)P₂. SHIP2 is ubiquitously expressed while SHIP1 is only found in hematopoietic lineage cells. 3AC is a selective inhibitor of SHIP1 (EC₅₀ = 10 μM) and shows no inhibition of the other isoform, SHIP2, at concentrations up to 1 mM. 3AC promotes apoptosis of SHIP1-expressing leukemia cells (KG-1) and multiple myeloma cells (OPM) suggesting SHIP1 inhibition is a potential drug target for blood cancers. Mice treated with 3AC show increased numbers of MIR cells in the spleen and lymph nodes and increased numbers of granulocytes.

References: 1) R. Brooks, *et al.*, "SHIP1 Inhibition Increases Immunoregulatory Capacity and Triggers Apoptosis of Hematopoietic Cancer Cells" *J. Immun.*, 2010, *184*, 3582-3589. 2) G.M. Fuhler, *et al.* "Therapeutic Potential of SH2 Domain-Containing Inositol-5-Phosphatase 1 (SHIP1) and SHIP2 Inhibition in Cancer" *Mol. Med.*, 2012, *18*, 65-75.

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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