

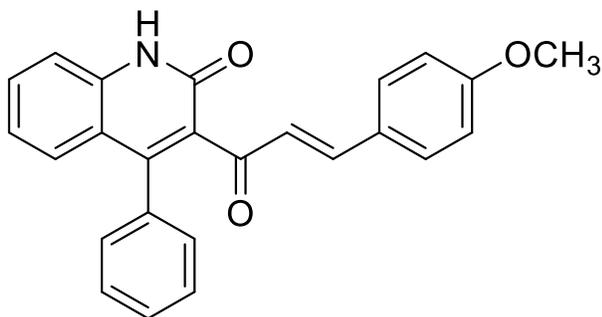
Ceranib-2 (Ceramidase inhibitor)

Catalog number: B-0043

Molecular Formula: $C_{25}H_{19}NO_3$

MW: 381.42

CAS: 1402830-75-4



Solubility: DMSO >20 mg/mL

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

Background: Ceramides are bioactive sphingolipids which induce apoptosis in cells. Ceramidases (CDase), which hydrolyze the fatty acid chain, keep ceramide levels in check and have been proposed as a target for small-molecule inhibitors for anti-cancer therapy. Ceranib-2 inhibits cellular CDase activity with an $\text{IC}_{50} = 28 \mu\text{M}$ in SKOV3 cells and does not show significant cytotoxicity up to $100 \mu\text{M}$. Incubation of SKOV3 cells with Ceranib-2 resulted in an increase in all ceramide species and a dose-dependant decrease in sphingosine and S1P. Ceranib-2 suppressed tumor growth in a mouse model with subcutaneous JC cell tumors.

References: 1) J.M Draper, et al. "Discovery and Evaluation of Inhibitors of Human Ceramidase" *Mol. Cancer Ther.* 2011, 10, 2052-2061 2) H.S. Vethakanraj, et al. "Targeting ceramide metabolic pathway induces apoptosis in human breast cancer cell lines" *Biophys. Biochem. Res. Commun.* 2015, 464, 833-839.

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.

Warranty and Disclaimer: Echelon warrants the product conforms to the specifications stated herein. In the event of nonconformity, Echelon will replace products or refund purchase price, at its sole option, and Echelon shall not be responsible for any other loss or damage, whether known or foreseeable to Echelon. No other warranties apply, express or implied, including but not limited to warranty of fitness for any purpose or implied warranty of merchantability. Purchaser is solely responsible for all consequences of its use of the product and Echelon assumes no responsibility therefore, including success of purchaser's research and development, or health or safety of any uses of the product.