

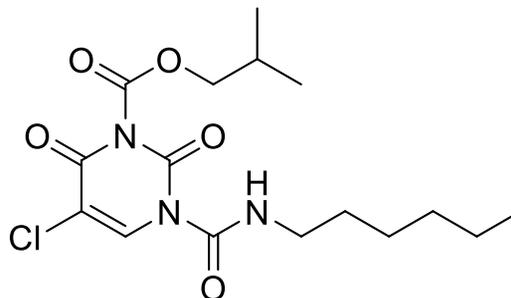
## ARN14988 (aCDase inhibitor)

Catalog number: B-0041

Molecular Formula:  $C_{16}H_{24}ClN_3O_5$

MW: 373.83

CAS: 1502027-70-4



Solubility: most organic solvents, poorly soluble in water

Storage and Handling: Store dry at  $-20^{\circ}\text{C}$ . Stock solutions should be stored frozen ( $-20^{\circ}\text{C}$ ).

**Background:** Acid ceramidase (aCDase) is a lysosomal amidase which hydrolyzes the acyl chain from ceramides forming sphingosine which is subsequently phosphorylated to the bioactive lipid sphingosine 1-phosphate. aCDase is upregulated in many cancer types such as melanoma, prostate, head neck and colon cancers. ARN14988 is a potent inhibitor of aCDase *in vitro* ( $\text{IC}_{50} = 12 \text{ nM}$ ) and in A375 melanoma cells ( $\text{IC}_{50} = 1.5 \mu\text{M}$ ). ARN14988 is weakly cytotoxic on by itself but shows a synergistic effect with some common anticancer drugs (5-Fluorouracil, vemurafinib, and taxol) in proliferative G361 cells.

**References:** 1) N. Realini, *et al.* "Acid Ceramidase in Melanoma: expression, localization, and effects of pharmacological inhibition" *J. Biol. Chem.*, **2016**, 291, 2422-2434. 2) Doan, N.B. *et al.* "Acid ceramidase and its inhibitors: a *de novo* drug target and a new class of drugs for killing glioblastoma cancer stem cells with high efficiency" *Oncotarget*, **2017**, 8(68), 112662–112674.

**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.

