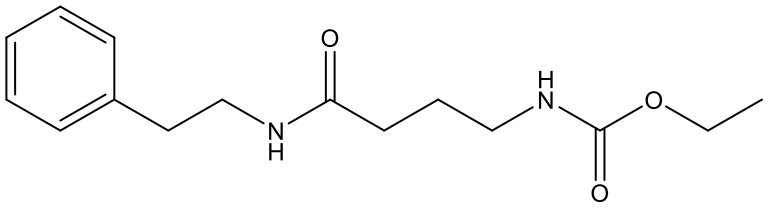
Catalog # 10-3613

Santacruzamate A

CAS# 1477949-42-0

N-[4-Oxo-4-[(2-phenylethyl)amino]butyl]-carbamic acid, ethyl ester

Lot # S105093



A highly potent and selective inhibitor of HDAC2 isolated from the Panamanian marine cyanobacterium *cf. Symploca* (IC_{50}=0.119 and 434 nM for HDAC2 and HDAC6 respectively).[1] Induces apoptosis and cancer cell death only in combination with other HDAC1 inhibitors.[2] Potential therapeutic agent for breast cancer.[3] Attenuates Aβ fragment ($A\beta_{25-35}$)-induced toxicity in PC12 cells by enhancing ER stress tolerance.[4] Ameliorates Alzheimer's disease-like pathology in mouse models.[4]

1) Pavlik *et al*. (2013), *Santacruzamate A, a potent and selective histone deacetylase inhibitor from the Panamanian marine cyanobacterium cf. Symploca sp.*; J. Nat. Prod., **76** 2026
2) Zhou *et al*. (2018), *Pharmacological or transcriptional inhibition of both HDAC1 and 2 leads to cell cycle blockage and apoptosis via p21$^{Waf1/Cip1}$ and p19^{INK4d} upregulation in hepatocellular carcinoma*; Cell Prolif., **51(3)** e12447
3) Damaskos *et al*. (2017), *Histone Deacetylase Inhibitors: An Attractive Therapeutic Strategy Against Breast Cancer*; Anticancer Res., **37** 35
4) Chen *et al*. (2019), *Santacruzamate A Ameliorates AD-Like Pathology by Enhancing ER Stress Tolerance Through Regulating the Functions of KDELR and Mia40-ALR in vivo and in vitro*; Front. Cell. Neurosci., **13** 61

PHYSICAL DATA

Molecular Weight:	278.35
Molecular Formula:	$C_{15}H_{22}N_2O_3$
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 25 mg/ml) or Ethanol (up to 20 mg/ml)
Physical Description:	Off-white solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 2 months.

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