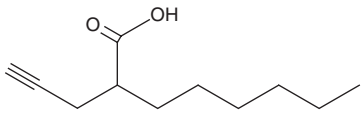
PRODUCT INFORMATION

2-hexyl-4-Pentynoic Acid

Item No. 15205

CAS Registry No.: 96017-59-3
Formal Name: 2-(2-propyn-1-yl)-octanoic acid
MF: $C_{11}H_{18}O_2$
FW: 182.3
Purity: ≥95%
Supplied as: A neat oil
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

2-hexyl-4-Pentynoic acid is supplied as a neat oil. A stock solution may be made by dissolving the 2-hexyl-4-pentynoic acid in the solvent of choice, which should be purged with an inert gas. 2-hexyl-4-Pentynoic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 2-hexyl-4-pentynoic acid in these solvents is approximately 33, 20, and 16 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 2-hexyl-4-pentynoic acid can be prepared by directly dissolving the neat oil in aqueous buffers. The solubility of 2-hexyl-4-pentynoic acid in PBS, pH 7.2, is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

2-hexyl-4-Pentynoic acid is a derivative of valproic acid (Item No. 13033), an inhibitor of histone deacetylases (HDACs). It inhibits HDAC activity more potently (IC_{50} = 13 µM) than valproic acid (IC_{50} = 398 µM).[1] 2-hexyl-4-Pentynoic acid induces histone hyperacetylation in cerebellar granule cells significantly at 5 µM.[1] It also induces the expression of heat shock proteins Hsp70-1a and Hsp70-1b and protects cerebellar granule cells from glutamate-induced excitotoxicity when used at a concentration of 50 µM.[1]

Reference

1. Leng, Y., Marinova, Z., Reis-Fernandes, M.A., *et al*. Potent neuroprotective effects of novel structural derivatives of valproic acid: Potential roles of HDAC inhibition and HSP70 induction. *Neurosci. Lett.* **476(3)**, 127-132 (2010).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM