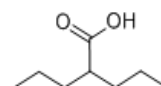


Product Data Sheet

Product Name: Valproic acid
CAS No.: 99-66-1
Cat. No.: HY-10585
MWt: 144.21
Formula: C₈H₁₆O₂
Purity : >98%

Solubility: DMSO



Mechanisms:

Pathways: Cell Cycle/DNA Damage; Target: HDAC

Biological Activity:

Valproic acid, a histone deacetylase (HDAC) inhibitor (IC₅₀=10 uM in HeLa cell, 24h) has an anticancer effect.

IC₅₀ Value: 10 uM (HeLa, 24h) [1]

Target: HDAC

in vitro: Valproic acid had the effect on the growth and death of HeLa cervical cancer cells in relation to reactive oxygen species (ROS) and glutathione (GSH). Dose- and time-dependent growth inhibition was observed in HeLa cells with an IC₅₀ of approximately 10 uM at 24 h. DNA flow cytometric analysis indicated that 10 uM VPA induced a G2/M phase arrest of the cell cycle. This agent also induced apoptosis, which was accompanied by the cleavage of PARP, the activation of caspase-3, -8 and -9, and the loss of mitochondrial membrane potential (MMP; Ψ_m). All the tested caspase inhibitors significantly prevented HeLa apoptotic cell death induced by VPA, whereas TNF- α intensified the apoptotic cell death [1]. Valpro...

References:

- [1]. Han BR, et al. Valproic acid inhibits the growth of HeLa cervical cancer cells via caspase-dependent apoptosis. *Oncol Rep.* 2013 Dec;30(6):2999-3005.
- [2]. Zhang ZH, et al. Valproic acid inhibits tumor angiogenesis in mice transplanted with Kasumi 1 leukemia cells. *Mol Med Rep.* 2013 Nov 28.
- [3]. Cohen OS, et al. Acute prenatal exposure to a moderate dose of valproic acid increases social behavior and alters gene expression in rats. *Int J Dev Neurosci.* 2013 Dec;31(8):740-50.
- [4]. Avery LB, et al. Valproic Acid Is a Novel Activator of AMP-Activated Protein Kinase and Decreases Liver Mass, Hepatic Fat Accumulation, and Serum Glucose in Obese Mice. *Mol Pharmacol.* 2014 Jan;85(1):1-10.
- [5]. Nanau RM, et al. Adverse drug reactions induced by valproic acid. *Clin Biochem.* 2013 Oct;46(15):1323-38.

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Caution: Not fully tested. For research purposes only

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