Vorinostat

货号：V1991

储存条件：粉末-20°C 可保存 3 年；液体-80°C 可保存 12 月。

产品描述

HDACs (Histone deacetylases) are a group of enzymes that remove acetyl groups and regulate the histone tail, protein-DNA interaction, chromatin conformation, and even transcription. There are 18 mammalian HDACs divided into four classes: class I (HDACs 1, 2, 3, 8), class II (HDACs 4, 5, 6, 7, 9, 10), class III (sirtuin family: sirt1-sirt7) and class IV (HDAC 11). Vorinostat, also called as SAHA or MK0683, is a hydroxamic acid based class I and II HDACs pan inhibitor with IC50 value of 10nM on HDAC1 and 20 nM on HDAC3 (measured by immunoprecipitation–HDAC assays). Treatement with 6 μM of vorinostat in SH-SY5Y cells for 1 - 12 hours can increase the acetylation signals of histone H3 and H4 in a time-dependent manner. Vorinostat can induce cell-growth inhibition in SH-SY5Y cell line with IC50 value of 2.5 μM and 10 μM at 72h and 48h, respectively. SILAC-based quantitative MS analysis show that SAHA has a dramatic impact on histone lysine acetylation and butyrylation with strong increase in H3K9ac, H3K27ac, H2BK5bu and H4K12bu of SHSY5Y cells. Vorinostat is clinically approved for cutaneous T-cell lymphoma. Both of gene expression and function of proteins regulating cell proliferation and cell death pathways are involved in the anticancer effects of SAHA, including TFIIB, Rb, Hsp90, Bcl-2 family, tubulin, HIF-1a, ROS, etc.

作用机制

Vorinostat, structurally similar to TSA, chelates the zinc ion of HDACs by its hydroxamic group.

产品信息

CAS 号	149647-78-9	
分子式	C14H20N2O3	
分子量	264.32	
别名	SAHA;Suberoylanilide Hydroxamic Acid;MK0683	
溶解度	DMSO	300.0 mg/mL (1135.0 mM) warming
	Water	insoluble