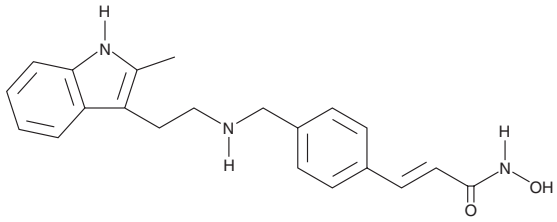
PRODUCT INFORMATION

Panobinostat

Item No. 13280

CAS Registry No.: 404950-80-7
Formal Name: (2E)-N-hydroxy-3-[4-[[[2-(2-methyl-1H-indol-3-yl) ethyl]amino]methyl]phenyl]-2-propenamide
Synonym: LBH-589
MF: $C_{21}H_{23}N_3O_2$
FW: 349.4
Purity: ≥98%
UV/Vis.: λ_{max}: 225, 283 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Panobinostat is supplied as a crystalline solid. A stock solution may be made by dissolving the panobinostat in the solvent of choice, which should be purged with an inert gas. Panobinostat is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of panobinostat in these solvents is approximately 3.3, 33, and 50 mg/ml, respectively.

Panobinostat is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, panobinostat should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Panobinostat has a solubility of approximately 0.1 mg/ml in a 1:3 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Panobinostat is a pan-inhibitor of histone deacetylases (HDACs; K_is = 0.6-31 nM for HDAC1-11).[1] It inhibits growth in a panel of 37 human or mouse lung cancer cell lines, including small cell lung cancer (SCLC), non-small cell lung cancer (NSCLC), and mesothelioma cells (IC_{50}s = 4-175, 5-310, and 5-470 nM, respectively), but not NCI H661 mouse NSCLC cells (IC_{50} = >800 nM).[2] Panobinostat (20 mg/kg, i.p.) induces tumor regression in BK-T and RG-1 SCLC mouse xenograft models.

References

1. Wang, H., Yu, N., Chen, D., *et al*. Discovery of (2E)-3-{2-butyl-1-[2-diethylamino)ethyl]-1H-benzamidazol-5-yl}-N-hydroxyacrylamide (SB939), an orally active histone deacetylase inhibitor with a superior preclinical profile. *J. Med. Chem.* **54(13)**, 4694-4720 (2011).
2. Crisanti, M.C., Wallace, A.F., Kapoor, V., *et al*. The HDAC inhibitor panobinostat (LBH589) inhibits mesothelioma and lung cancer cells *in vitro* and *in vivo* with particular efficacy for small cell lung cancer. *Mol. Cancer Ther*. **8(8)**, 2221-2231 (2009).

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