PRODUCT INFORMATION

Panobinostat-d_4 (hydrochloride)

Item No. 28501

Formal Name: (2E)-N-hydroxy-3-[4-[[[2-(2-methyl-1H-indol-3-yl-4,5,6,7-d_4)ethyl]amino]methyl]phenyl]-2-propenamide, monohydrochloride

Synonym: LBH-589-d_4

MF: $C_{21}H_{19}D_4N_3O_2$ • HCl

FW: 389.9

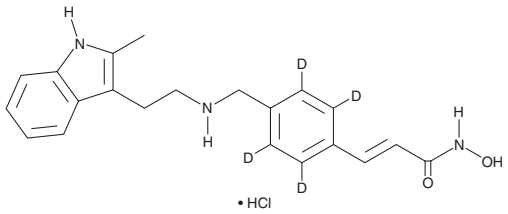
Chemical Purity: ≥98% (Panobinostat)

Deuterium Incorporation: ≥99% deuterated forms (d_1-d_4); ≤1% d_0

Supplied as: A 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-d_4 (hydrochloride) is intended for use as an internal standard for the quantification of panobinostat (Item No. 13280) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Panobinostat-d_4 (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the panobinostat-d_4 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Panobinostat-d_4 (hydrochloride) is soluble in methanol and DMSO.

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 cancer 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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