

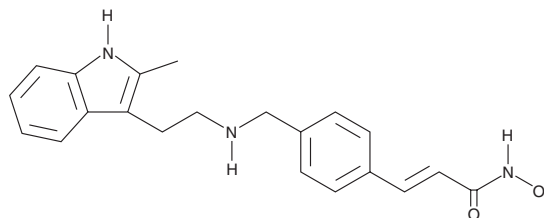
# PRODUCT INFORMATION



## 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<sub>21</sub>H<sub>23</sub>N<sub>3</sub>O<sub>2</sub>  
**FW:** 349.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 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<sub>i</sub>s = 0.6-31 nM for HDAC1-11).<sup>1</sup> 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<sub>50</sub>s = 4-175, 5-310, and 5-470 nM, respectively), but not NCI H661 mouse NSCLC cells (IC<sub>50</sub> = >800 nM).<sup>2</sup> 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).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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