

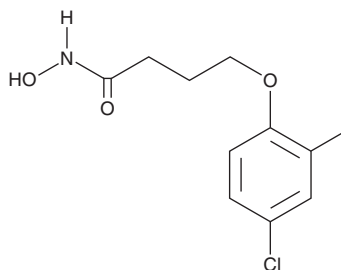
# PRODUCT INFORMATION



## Droxinostat

Item No. 23869

**CAS Registry No.:** 99873-43-5  
**Formal Name:** 4-(4-chloro-2-methylphenoxy)-N-hydroxy-butanamide  
**Synonym:** NS 41080  
**MF:** C<sub>11</sub>H<sub>14</sub>ClNO<sub>3</sub>  
**FW:** 243.7  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 231, 281 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

Droxinostat is supplied as a crystalline solid. A stock solution may be made by dissolving the droxinostat in the solvent of choice, which should be purged with an inert gas. Droxinostat is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of droxinostat in these solvents is approximately 30 mg/ml.

Droxinostat is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, droxinostat should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Droxinostat has a solubility of approximately 0.05 mg/ml in a 1:20 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Droxinostat is an inhibitor of histone deacetylase (HDAC) 3, 6, and 8 (IC<sub>50</sub>s = 16.9, 2.47, and 1.46 μM, respectively).<sup>1</sup> It is selective for HDAC3, 6, and 8 over HDAC1, 2, 7, 9, and 10 (IC<sub>50</sub>s = >20 μM). Droxinostat increases histone H3 and H4 acetylation in PPC-1 prostate, OVCAR3 ovarian, U937 leukemia, HT-29 colon, and T47D breast cancer cells. It also inhibits proliferation and colony formation of SMMC-7721 and HepG2 hepatocellular carcinoma cell lines *via* activation of mitochondrial apoptosis and reduction of cellular FLICE-inhibitory protein (c-FLIP).<sup>2</sup>

### References

1. Wood, T.E., Dalili, S., Simpson, C.D., *et al.* Selective inhibition of histone deacetylases sensitizes malignant cells to death receptor ligands. *Mol. Cancer Ther.* **9(1)**, 246-256 (2010).
2. Liu, J., Li, G., Wang, X., *et al.* Droxinostat, a histone deacetylase inhibitor, induces apoptosis in hepatocellular carcinoma cell lines *via* activation of the mitochondrial pathway and downregulation of FLIP. *Transl. Oncol.* **9(1)**, 70-78 (2016).

#### 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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