

# PRODUCT INFORMATION

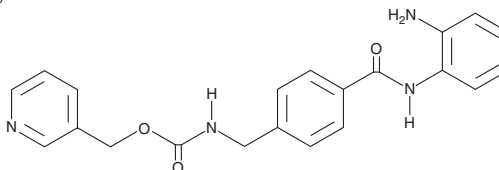


## MS-275

Item No. 13284

**CAS Registry No.:** 209783-80-2  
**Formal Name:** N-[[4-[[[(2-aminophenyl)amino]carbonyl]phenyl]methyl]-carbamic acid, 3-pyridinylmethyl ester

**Synonyms:** Entinostat, SNDX 275  
**MF:** C<sub>21</sub>H<sub>20</sub>N<sub>4</sub>O<sub>3</sub>  
**FW:** 376.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 204, 233, 299 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

MS-275 is supplied as a crystalline solid. A stock solution may be made by dissolving the MS-275 in the solvent of choice, which should be purged with an inert gas. MS-275 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of MS-275 in ethanol is approximately 2 mg/ml and approximately 30 mg/ml in DMSO and DMF.

MS-275 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MS-275 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. MS-275 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

MS-275 is an inhibitor of histone deacetylases (HDACs) that preferentially inhibits HDAC1 (IC<sub>50</sub> = 300 nM) over HDAC3 (IC<sub>50</sub> = 8 μM).<sup>1</sup> However, it does not inhibit HDAC8 (IC<sub>50</sub> > 100 μM).<sup>1</sup> MS-275 induces cyclin-dependent kinase inhibitor 1A (p21/CIP1/WAF1), slowing cell growth, differentiation, and tumor development *in vivo*.<sup>2,3</sup> Recent studies suggest that MS-275 may be particularly useful as an antineoplastic agent when combined with other drugs, like adriamycin, inhibitors of poly (ADP-ribose) polymerase (PARP), or inhibitors of heat shock protein 90 (Hsp90).<sup>4-6</sup>

### References

1. Hu, E., Dul, E., Sung, C.-M., *et al.* *J. Pharmacol. Exp. Ther.* **307**(2), 720-728 (2003).
2. Saito, A., Yamashita, T., Mariko, Y., *et al.* *Proc. Natl. Acad. Sci. USA* **96**(8), 4592-4597 (1999).
3. Jaboin, J., Wild, J., Hamidi, H., *et al.* *Cancer Res.* **62**(21), 6108-6115 (2002).
4. Xu, J., Zhou, J.-Y., Wei, W.-Z., *et al.* *Cancer Res.* **68**(16), 6718-6726 (2008).
5. Gaymes, T.J., Shall, S., Macpherson, L.J., *et al.* *Haematologica* **94**(5), 638-646 (2009).
6. Nguyen, A., Su, L., Campbell, B., *et al.* *Sarcoma* 794901 (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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/08/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897

[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM