

PRODUCT INFORMATION



MMP-2 Inhibitor I

Item No. 19644

CAS Registry No.: 10335-69-0
Formal Name: N-hydroxy-9Z-octadecenamide
Synonyms: Matrix Metalloproteinase-2 Inhibitor I, *cis*-9-Octadecenoyl-N-hydroxylamide, Oleylhydroxamate,

MF: C₁₈H₃₅NO₂

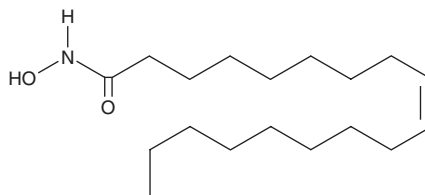
FW: 297.5

Purity: ≥98%

Supplied as: A crystalline solid

Storage: -20°C

Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

MMP-2 Inhibitor I is supplied as a crystalline solid. A stock solution may be made by dissolving the MMP-2 inhibitor I in the solvent of choice. MMP-2 Inhibitor I is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of MMP-2 inhibitor I in these solvents is approximately 50 mg/ml.

MMP-2 Inhibitor I is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MMP-2 inhibitor I should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. MMP-2 Inhibitor I has a solubility of approximately 0.3 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

MMP-2 Inhibitor I is a hydroxamate-based, long-chain fatty acid that acts as a reversible inhibitor of matrix metalloproteinase (MMP)-2 ($K_i = 1.6 \mu\text{M}$), a protein implicated in the pathological breakdown of extracellular matrix proteins.¹ Increased levels of MMP-2 are associated with tumor invasion and metastasis. This compound has been shown to attenuate cancer cell migration.² It has also been used to preserve blood-brain barrier function in a rat model of pneumococcal meningitis.³

References

1. Berton, A., Rigot, V., Huett, E., *et al.* Involvement of fibronectin type II repeats in the efficient inhibition of gelatinases A and B by long-chain unsaturated fatty acids. *J. Biol. Chem.* **276**(23), 20458-20465 (2016).
2. Emmert-Buck, M.R., Roth, M.J., Zhuang, Z., *et al.* Increased gelatinase A (MMP-2) and cathepsin B activity in invasive tumor regions of human colon cancer samples. *Am. J. Pathol.* **145**(6), 1285-1290 (1994).
3. Barichello, T., Generoso, J.S., Michelon, C.M., *et al.* Inhibition of matrix metalloproteinases-2 and -9 prevents cognitive impairment induced by pneumococcal meningitis in Wistar rats. *Exp. Biol. Med.* (Maywood) **239**(2), 225-231 (2014).

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.

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