

PRODUCT INFORMATION



MMP-3 Inhibitor VIII

Item No. 17246

CAS Registry No.: 208663-26-7
Formal Name: N-hydroxy-2-[[[4-methoxyphenyl)sulfonyl](phenylmethyl)amino]-4-methylpentanamide

Synonyms: Matrix Metalloproteinase-3 Inhibitor VIII, Stromelysin-1 Inhibitor VIII

MF: C₂₀H₂₆N₂O₅S

FW: 406.5

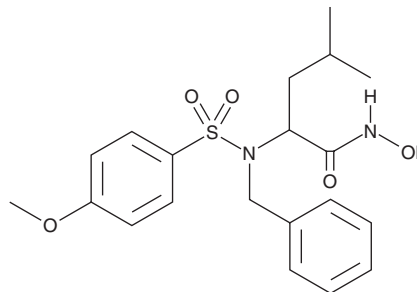
Purity: ≥95%

UV/Vis.: λ_{max}: 245 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

MMP-3 inhibitor VIII is supplied as a crystalline solid. A stock solution may be made by dissolving the MMP-3 inhibitor VIII in the solvent of choice, which should be purged with an inert gas. MMP-3 inhibitor VIII is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of MMP-3 inhibitor VIII in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

MMP-3 inhibitor VIII is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MMP-3 inhibitor VIII should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. MMP-3 inhibitor VIII 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

Matrix metalloproteinases (MMPs) belong to a family of proteases that play a crucial role in tissue remodeling and repair by degrading extracellular matrix proteins to enable cell migration.¹ MMP-3 (also known as stromelysin-1) is thought to play a role in the vascular remodeling that occurs during aneurysm formation and may also be involved in wound repair, progression of atherosclerosis, and tumor initiation.² MMP-3 inhibitor VIII is a cell permeable sulfonamide-based hydroxamic acid that binds to the active site of MMP-3 (K_i = 23 nM) and prevents its activity.³ This compound has also been shown to inhibit mouse macrophage metalloelastase MME/MMP-12 with an IC₅₀ value of 13 nM.⁴

References

1. Nagase, H. and Woessner, J.F., Jr. Matrix metalloproteinases. *J. Biol. Chem.* **274**(31), 21491-21494 (1999).
2. Sindermann, J.R., Köbbert, C., Voss, R., *et al.* Transgenic model of smooth muscle cell cycle reentry: Expression pattern of the collageneous matrix. *Cardiovasc. Pathol.* **17**(2), 72-80 (2008).
3. Macpherson, L.J., Bayburt, E.K., Capparelli, M.P., *et al.* Discovery of CGS 27023A, a non-peptidic, potent, and orally active stromelysin inhibitor that blocks cartilage degradation in rabbits. *J. Med. Chem.* **40**(16), 2525-2532 (1997).
4. Jeng, A.Y., Chou, M., and Parker, D.T. Sulfonamide-based hydroxamic acids as potent inhibitors of mouse macrophage metalloelastase. *Bioorg. Med. Chem. Lett.* **8**(8), 897-902 (1998).

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, 10/12/2022

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