

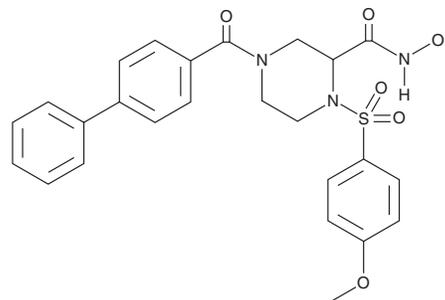
PRODUCT INFORMATION



MMP-9/MMP-13 Inhibitor I

Item No. 21265

CAS Registry No.: 204140-01-2
Formal Name: 4-([1,1'-biphenyl]-4-ylcarbonyl)-N-hydroxy-1-[(4-methoxyphenyl)sulfonyl]-2-piperazinecarboxamide
Synonym: Matrix Metalloproteinase-9/Matrix Metalloproteinase-13 Inhibitor I
MF: C₂₅H₂₅N₃O₆S
FW: 495.6
Purity: ≥98%
UV/Vis.: λ_{max}: 248 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-9/MMP-13 inhibitor I is supplied as a crystalline solid. A stock solution may be made by dissolving the MMP-9/MMP-13 inhibitor I in the solvent of choice, which should be purged with an inert gas. MMP-9/MMP-13 inhibitor I is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of MMP-9/MMP-13 inhibitor I in these solvents is approximately 25 and 30 mg/ml, respectively.

Description

MMP-9/MMP-13 inhibitor I is a cell-permeable inhibitor of matrix metalloproteinases (MMPs) that most potently inhibits MMP-9 and MMP-13 (IC₅₀s = 0.9 nM for both).¹ It less effectively inhibits MMP-1, MMP-3, and MMP-7 (IC₅₀s = 43, 23, and 920 nM, respectively).¹ MMP-9/MMP-13 inhibitor I has been used to elucidate the roles of MMPs in biological systems, including tumor cell invasion and pathogenesis of *P. falciparum*.²⁻⁴

References

1. Cheng, M., De, B., Pikul, S., *et al.* Design and synthesis of piperazine-based matrix metalloproteinase inhibitors. *J. Med. Chem.* **43**(3), 369-380 (2000).
2. Prato, M., Giribaldi, G., Polimeni, M., *et al.* Phagocytosis of hemozoin enhances matrix metalloproteinase-9 activity and TNF- α production in human monocytes: Role of matrix metalloproteinases in the pathogenesis of falciparum malaria. *J. Immunol.* **175**(10), 6436-6442 (2005).
3. Storz, P., Döppler, H., Copland, J.A., *et al.* FOXO3a promotes tumor cell invasion through the induction of matrix metalloproteinases. *Mol. Cell. Biol.* **29**(18), 4906-4917 (2009).
4. Swamydas, M., Ricci, K., Rego, S.L., *et al.* Mesenchymal stem cell-derived CCL-9 and CCL-5 promote mammary tumor cell invasion and the activation of matrix metalloproteinases. *Cell Adh. Migr.* **7**(3), 315-324 (2013).

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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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