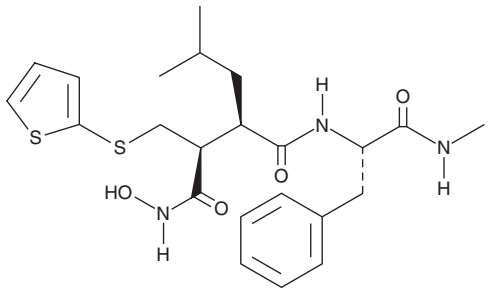
PRODUCT INFORMATION

Batimastat

Item No. 14742

CAS Registry No.: 130370-60-4
Formal Name: (2R,3S)-N^4-hydroxy-N^1-[(1S)-2-(methylamino)-2-oxo-1-(phenylmethyl)ethyl]-2-(2-methylpropyl)-3-[(2-thienylthio)methyl]-butanediamide
Synonym: BB-94
MF: $C_{23}H_{31}N_3O_4S_2$
FW: 477.6
Purity: ≥98%
UV/Vis.: λ_{max}: 269 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

Batimastat is supplied as a crystalline solid. A stock solution may be made by dissolving the batimastat in the solvent of choice, which should be purged with an inert gas. Batimastat is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of batimastat in these solvents is approximately 2 and 10 mg/ml, respectively.

Description

Batimastat is a broad spectrum inhibitor of matrix metalloproteinases (MMP), with IC_{50} values of 1-5 nM for all MMPs tested, including MMP-1, -2, -3, -7, -9, -13, and -14.[1-4] It also potently inhibits TNFα-converting enzyme (IC_{50} = 14.9 nM).[2] Because of its action on MMPs, batimastat has anti-proliferative, anti-invasive, and anti-metastatic actions that are relevant, in particular, to cancer.[5] Batimastat less effectively inhibits the processing of the low affinity IgE receptor CD23 (IC_{50} = 100 nM).[6]

References

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2. Fray, M.J., Dickinson, R.P., Huggins, J.P., *et al.* A potent, selective inhibitor of matrix metalloproteinase-3 for the topical treatment of chronic dermal ulcers. *J. Med. Chem.* **46(16)**, 3514-3525 (2003).
3. Sheppard, G.S., Florjancic, A.S., Giesler, J.R., *et al.* Aryl ketones as novel replacements for the C-terminal amide bond of succinyl hydroxamate MMP inhibitors. *Bioorg. Med. Chem. Lett.* **8(22)**, 3251-3256 (1998).
4. Yamamoto, M., Tsujishita, H., Hori, N., *et al.* Inhibition of membrane-type 1 matrix metalloproteinase by hydroxamate inhibitors: An examination of the subsite pocket. *J. Med. Chem.* **41(8)**, 1209-1217 (1998).
5. Chaudhary, A.K., Pandya, S., Ghosh, K., *et al.* Matrix metalloproteinase and its drug targets therapy in solid and hematological malignancies: An overview. *Mutat. Res.* **753(1)**, 7-23 (2013).
6. Bailey, S., Bolognese, B., Buckle, D.R., *et al.* Selective inhibition of low affinity IgE receptor (CD23) processing. *Bioorg. Med. Chem. Lett.* **8(1)**, 29-34 (1998).

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