

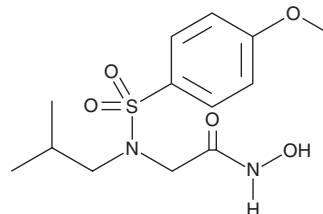
PRODUCT INFORMATION



NNGH

Item No. 16886

CAS Registry No.: 161314-17-6
Formal Name: N-hydroxy-2-[[[4-methoxyphenyl)sulfonyl] (2-methylpropyl)amino]-acetamide
Synonyms: N-Isobutyl-N-(4-methoxyphenylsulfonyl)glycyl Hydroxamic Acid, Matrix Metalloproteinase-3 Inhibitor II, MMP-3 Inhibitor II
MF: C₁₃H₂₀N₂O₅S
FW: 316.4
Purity: ≥99%
Supplied as: A solid
Storage: Room temperature
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

NNGH is supplied as a solid. A stock solution may be made by dissolving the NNGH in the solvent of choice, which should be purged with an inert gas. NNGH is soluble in organic solvents such as ethanol and DMSO. The solubility of NNGH in these solvents is approximately 25 and 100 mM, respectively.

Description

NNGH is a cell-permeable, broad-spectrum inhibitor of matrix metalloproteinases (MMPs). It blocks the activity of MMP-8, -9, -12, -13, and -20 with K_i values of 9, 2.6, 4.3, 3.1, and 17 nM, respectively.^{1,2} It also inhibits MMP-1, -3, -7, and -10 with K_i values of 0.17, 0.13, 13, and 0.1 μM, respectively.^{1,2} It is commonly used to study the role of MMP-3 (stromelysin 1) in biological systems.³⁻⁵

References

1. Arendt, Y., Banci, L., Bertini, I., *et al.* Catalytic domain of MMP20 (Enamelysin) - the NMR structure of a new matrix metalloproteinase. *FEBS Lett.* **581**, 4723-4726 (2007).
2. Attolino, E., Calderone, V., Dragoni, E., *et al.* Structure-based approach to nanomolar, water soluble matrix metalloproteinases inhibitors (MMPIs). *Eur. J. Med. Chem.* (2010).
3. Kim, Y.S., Kim, S.S., Cho, J.J., *et al.* Matrix metalloproteinase-3: A novel signaling proteinase from apoptotic neuronal cells that activates microglia. *J. Neurosci.* **25(14)**, 3701-3711 (2005).
4. Woo, M.-S., Park, J.-S., Choi, I.-Y., *et al.* Inhibition of MMP-3 or -9 suppresses lipopolysaccharide-induced expression of proinflammatory cytokines and iNOS in microglia. *J. Neurochem.* **106**, 770-780 (2008).
5. Christianson, C.A., Fitzsimmons, B.L., Shim, J.-H., *et al.* Spinal matrix metalloproteinase 3 mediates inflammatory hyperalgesia via a TNF dependent mechanism. *Neuroscience* **200**, 199-210 (2012).

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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