

PRODUCT INFORMATION

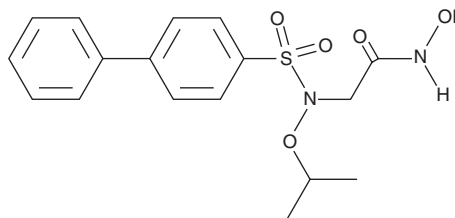


ARP 100

Item No. 13321

CAS Registry No.: 704888-90-4
Formal Name: 2-[[[1,1'-biphenyl]-4-ylsulfonyl]
(1-methylethoxy)amino]-N-hydroxy-acetamide
Synonyms: CAY10609,
Matrix Metalloproteinase-2 Inhibitor III,
MMP-2 Inhibitor III

MF: C₁₇H₂₀N₂O₅S
FW: 364.4
Purity: ≥98%
UV/Vis.: λ_{max}: 268 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

ARP 100 is supplied as a crystalline solid. A stock solution may be made by dissolving the ARP 100 in the solvent of choice, which should be purged with an inert gas. ARP 100 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ARP 100 in ethanol is approximately 30 mg/ml and approximately 25 mg/ml in DMSO and DMF.

ARP 100 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ARP 100 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. ARP 100 has a solubility of approximately 0.1 mg/ml in a 1:10 solution of ethanol: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 During cancer progression both MMP-2 and MMP-9 play a role in metastatic tumor dispersion and angiogenesis. ARP 100 is a biphenylsulfonamide that acts as a selective inhibitor of MMP-2 demonstrating an IC₅₀ value of 12 nM.^{2,3} Due to its specific zinc binding domain configuration, the inhibitory activity of ARP 100 is significantly less potent towards MMP-1, MMP-3, MMP-7, and MMP-9 (IC₅₀ values are 50, 4.5, 50, and 2 μM, respectively).^{2,3} At 50 nM, ARP 100 suppresses the invasive behavior of HT1080 tumor cells grown on matrigel.²

References

1. Nagase, H. and Woessner, J.F., Jr. Matrix metalloproteinases. *J. Biol. Chem.* **274**(31), 21491-21494 (1999).
2. Rossello, A., Nuti, E., Orlandini, E., *et al.* New N-arylsulfonyl-N-alkoxyaminoacetohydroxamic acids as selective inhibitors of gelatinase A (MMP-2). *Bioorg. Med. Chem.* **12**(9), 2441-2450 (2004).
3. Tuccinardi, T., Martinelli, A., Nuti, E., *et al.* Amber force field implementation, molecular modelling study, synthesis and MMP-1/MMP-2 inhibition profile of (R)- and (S)-N-hydroxy-2-(N-isopropoxybiphenyl-4-ylsulfonamido)-3-methylbutanamides. *Bioorg. Med. Chem.* **14**(12), 4260-4276 (2006).

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.

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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