

PRODUCT INFORMATION



SM-164

Item No. 28632

CAS Registry No.: 957135-43-2
Formal Name: (3S,3'S,6S,6'S,10aS,10'aS)-N,N'-[1,4-phenylenebis[4,1-butanediyl-1H-1,2,3-triazole-1,4-diyl[(S)-phenylmethylene]]]bis[decahydro-6-[[[(2S)-2-(methylamino)-1-oxopropyl]amino]-5-oxo-pyrrolo[1,2-a]azocine-3-carboxamide

MF: C₆₂H₈₄N₁₄O₆

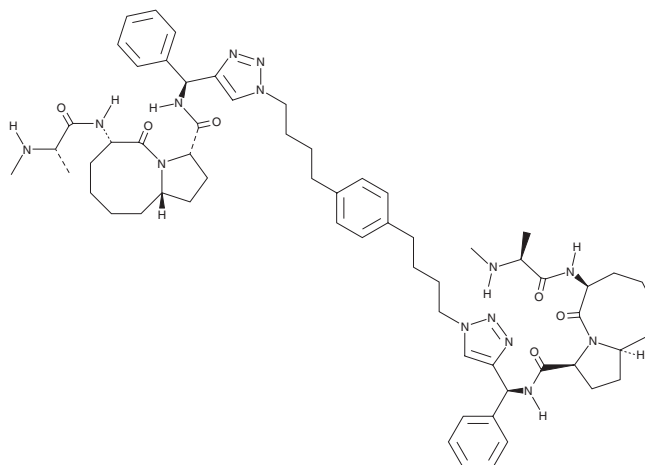
FW: 1,121.4

Purity: ≥95%

Supplied as: A 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

SM-164 is supplied as a solid. A stock solution may be made by dissolving the SM-164 in the solvent of choice, which should be purged with an inert gas. SM-164 is soluble in the organic solvent DMSO at a concentration of approximately 50 mg/ml.

Description

SM-164 is a cell-permeable bivalent mimetic of Smac and an inhibitor of X-linked inhibitor of apoptosis (XIAP).¹ It binds to BIR2 and BIR3 domain-containing XIAP with an IC₅₀ value of 1.39 nM and interacts with both domains. SM-164 inhibits growth (IC₅₀ = 1 nM), as well as activates caspase-3 and caspase-9, and induces cleavage of the caspase-3 substrate poly(ADP-ribose)-polymerase (PARP), a marker of apoptosis, in HL-60 leukemia cells when used at a concentration of 10 nM. It also reduces tumor volume by 80% in a 2LMP breast cancer mouse xenograft model when administered at a dose of 5 mg/kg in combination with TNF-related apoptosis-inducing ligand (TRAIL).²

References

1. Sun, H., Nikolovska-Coleska, Z., Lu, J., *et al.* Design, synthesis, and characterization of a potent, non-peptide, cell-permeable, bivalent Smac mimetic that concurrently targets both the BIR2 and BIR3 domains in XIAP. *J. Am. Chem. Soc.* **129(49)**, 15279-15294 (2007).
2. Lu, J., McEachern, D., Sun, H., *et al.* Therapeutic potential and molecular mechanism of a novel, potent, nonpeptide, Smac mimetic SM-164 in combination with TRAIL for cancer treatment. *Mol. Cancer Ther.* **10(5)**, 902-914 (2011).

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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