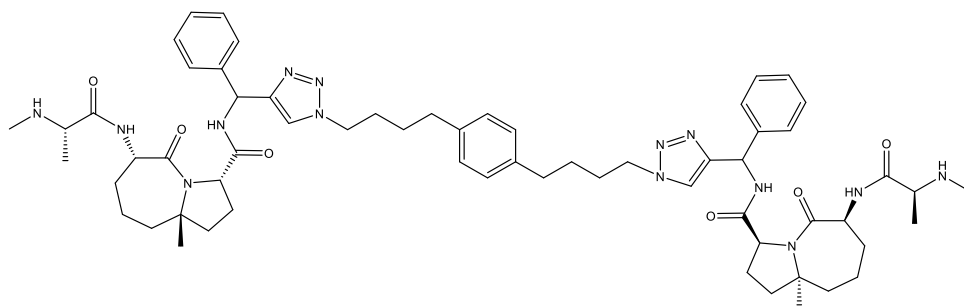


Catalog # 10-5464

SM-164

CAS# 957135-43-2

(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
Lot # X109873



SM-164 (957135-43-2) is a cell-permeable Smac (DIABLO) mimetic that inhibits caspase blockers XIAP, cIAP1, and cIAP2 ($K_i = 36, <1, \text{ and } <1.9 \text{ nM}$), thus inducing apoptosis.¹⁻³ SM-164 sensitizes cancer cells to DNA damaging agents.⁴ It also prevents binding of Hsp70 to XIAP.⁵ At high concentrations, it causes lytic cell death that is neither apoptosis nor necroptosis.⁶

- 1) Sun *et al.* (2007) *Design, synthesis, and characterization of a potent, nonpeptide, cell-permeable, bivalent Smac mimetic that concurrently targets both the BIR2 and BIR3 domains in XIAP*; J. Am. Chem. Soc. **129** 15279
- 2) Sun *et al.* (2010) *Nonpeptidic and potent small-molecule inhibitors of cIAP-1/2 and XIAP proteins*; J. Med. Chem. **53** 6361
- 3) Lu *et al.* (2008) *SM-164: a novel, bivalent Smac mimetic that induces apoptosis and tumor regression by concurrent removal of the blockade of cIAP-1/2 and XIAP*; Cancer Res. **68** 9384
- 4) Chen *et al.* (2019) *SM-164 enhances the antitumor activity of adriamycin in human U2-OS cells via downregulation of X-linked inhibitor of apoptosis protein*; Mol. Med. Rep. **19** 5079
- 5) Cesa *et al.* (2018) *X-linked inhibitor of apoptosis protein (XIAP) is a client of heat shock protein 70 (Hsp70) and a biomarker of its inhibition*; J. Biol. Chem. **293** 2370
- 6) Miles *et al.* (2020) *Smac mimetic can provoke lytic cell death that is neither apoptotic nor necroptotic*; Apoptosis **25** 500

PHYSICAL DATA

Molecular Weight: 1121.45
Molecular Formula: C₆₂H₈₄N₁₄O₆
Purity: >98% by HPLC
NMR: (Conforms)
Solubility: DMSO (50 mg/ml)
Physical Description: White to pale-yellow solid
Storage and Stability: Store as supplied at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.