

Product Data Sheet

SM-164

Cat. No.:	A8815
CAS No.:	957135-43-2
Formula:	C62H84N14O6
M.Wt:	1121.42
Synonyms:	
Target:	Apoptosis
Pathway:	IAP
Storage:	Store at -20°C



Solvent & Solubility

≥56.07 mg/mL in DMSO; insoluble in H₂O; insoluble in EtOH

In Vitro

Preparing Stock Solutions	Solvent		Mass		
	Concentration		1mg	5mg	10mg
	1 mM		0.8917 mL	4.4586 mL	8.9173 mL
	5 mM		0.1783 mL	0.8917 mL	1.7835 mL
	10 mM		0.0892 mL	0.4459 mL	0.8917 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary

Anticancer agent

IC₅₀ & Target

0.56 nM/0.31 nM/1.1 nM (IAP)

In Vitro

Cell Viability Assay

Cell Line:	MDA-MB-231 breast cancer cell
Preparation method:	Limited solubility. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	12 h-48 h

	Applications:	12 h 1 nmol/L SM-164 treatment induces 32%, 33%, and 37% of the MDA-MB-231, SK-OV-3 and MALME-3M cells to undergo apoptosis. SM-164 also leads to cIAP-1 degradation in resistant cancer cell line and effectively antagonizes cellular XIAP. Moreover, 3 to 10 nmol/L SM-164 induces cell death with or without TNF α in all these sensitive cancer cell lines.
In Vivo	Animal experiment	
	Animal models:	MDA-MB-231 xenograft tumor mice model
	Dosage form:	A single i.v. dose of SM-164 at 5 mg/kg.
	Applications:	At the 3-hour time point, SM-164 induces prominent apoptosis in tumor tissues, and more than 50% of tumor cells were TUNEL positive at the 6-hour time point. SM-164 reduces the tumor volume from 147 \pm 54 mm ³ (day 25-start of the treatment) to 54 \pm 32 mm ³ (day 36-end of treatment), a 65% reduction. SM-164 treatment also shows no significant weight loss or sign of toxicity.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

- Alexander F. G. Wintges. "Tumor immunosurveillance: Innate immune activation as a mechanistic prerequisite for efficient immune checkpoint blockade in cancer immunotherapy." d-nb.info. 2018.
- Saleh D, Degterev A. "Chemical Library Screens to Identify Pharmacological Modulators of Necroptosis." Methods Mol Biol. 2018;1857:19-33.PMID:30136227
- Hao Q, Tang H. "Interferon- γ and Smac mimetics synergize to induce apoptosis of lung cancer cells in a TNF α -independent manner." Cancer Cell Int. 2018 Jun 14;18:84.PMID:29946223
- Gavin C. Sampey, David M. Irlbeck, et al. "The SMAC Mimetic AZD5582 is a Potent HIV Latency Reversing Agent" bioRxiv.2018.May 2.
- Sarhan J, Liu BC, et al. "Constitutive interferon signaling maintains critical threshold of MLKL expression to license necroptosis." Cell Death Differ. 2018 May 21.PMID:29786074

See more customer validations on www.apexbt.com.

References

- Lu J, Bai L, Sun H, Nikolovska-Coleska Z et al. 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. 2008 Nov 15;68(22):9384-93.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

APExBIO Technology

www.apexbt.com

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com

