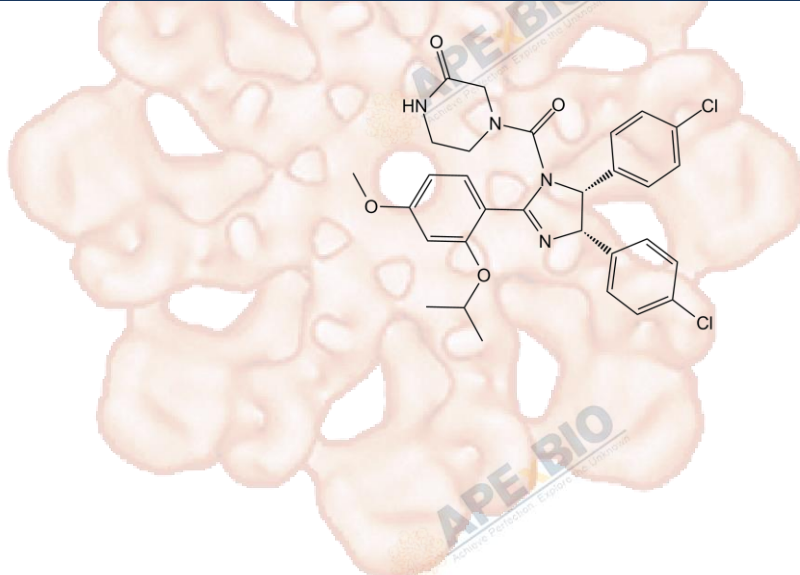


Product Data Sheet

Nutlin-3a chiral

Cat. No.:	A3671
CAS No.:	675576-98-4
Formula:	C30H30Cl2N4O4
M.Wt:	581.49
Synonyms:	Nutlin-3a; Nutlin 3a
Target:	Apoptosis
Pathway:	p53
Storage:	Store at -20°C



Solvent & Solubility

≥29.07 mg/mL in DMSO; insoluble in H₂O; ≥104.4 mg/mL in EtOH

In Vitro

Preparing Stock Solutions	Solvent	Mass		
		1mg	5mg	10mg
	Concentration			
	1 mM	1.7197 mL	8.5986 mL	17.1972 mL
	5 mM	0.3439 mL	1.7197 mL	3.4394 mL
	10 mM	0.1720 mL	0.8599 mL	1.7197 mL

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

Biological Activity

Shortsummary

MDM2 inhibitor, antiproliferative and antiproapoptotic

IC₅₀ & Target

0.09 μM (MDM2)

In Vitro

Cell Viability Assay

Cell Line:	HCT116 and SW480 cells
Preparation method:	The solubility of this compound in DMSO is >10 mM. 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:	1, 2, 4, 8 and 16 μM; 8 hrs

	Applications:	Nutlin-3a increased the cellular levels of p53, MDM2 and p21Waf1/Cip1 in HCT116 cells whilst SW480 cells exposed to the same conditions showed high basal levels of p53 but no detectable MDM2 or p21.
In Vivo	Animal experiment	
	Animal models:	Nude mice bearing subcutaneous human cancer xenografts (SJSA-1)
	Dosage form:	200 mg/kg; p.o.; b.i.d., for 20 days
	Applications:	Nutlin-3a inhibited tumor growth by 90%. The mice did not lose significant weight and did not show any gross abnormalities upon necropsy at the end of the treatment.
	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

1. Roscoe I, Parker M, et al. "Human Serum Albumin and the p53-Derived Peptide Fusion Protein Promotes Cytotoxicity Irrespective of p53 Status in Cancer Cells." Mol Pharm. 2018 Oct 10. PMID:30226785
2. Chen R, Zhou J, et al. "A Fusion Protein of the p53 Transcription Domain and the p53-Binding Domain of the Oncoprotein MdmX as an Efficient System for High-Throughput Screening of MdmX Inhibitors." Biochemistry. 2017 Jun 27;56(25):3273-3282. PMID:28581721

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References

- [1]. Vassilev LT, Vu BT, Graves B, et al. In vivo activation of the p53 pathway by small-molecule antagonists of MDM2. Science, 2004, 303(5659): 844-848.

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 APEX BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term 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.

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