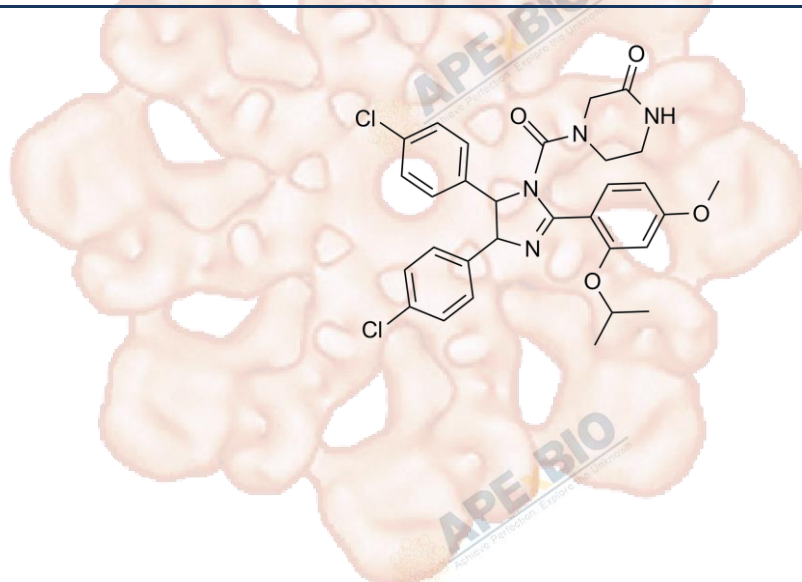


Product Data Sheet

Nutlin-3

Cat. No.:	A4228
CAS No.:	890090-75-2
Formula:	C ₃₀ H ₃₀ Cl ₂ N ₂ O ₄
M.Wt:	581.5
Synonyms:	Nutlin 3, MDM2 Antagonist
Target:	Apoptosis
Pathway:	p53
Storage:	Store at -20°C



Solvent & Solubility

≥58.2 mg/mL in DMSO; insoluble in H₂O; ≥5.69 mg/mL in EtOH with ultrasonic

In Vitro

Preparing Stock Solutions	Solvent	Mass		
		1mg	5mg	10mg
	Concentration			
	1 mM	1.7197 mL	8.5985 mL	17.1969 mL
	5 mM	0.3439 mL	1.7197 mL	3.4394 mL
	10 mM	0.1720 mL	0.8598 mL	1.7197 mL

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

Biological Activity

Shortsummary

MDM2 antagonist, inhibits MDM2-p53 interaction

IC₅₀ & Target

90 nM (Mdm2)

In Vitro

Cell Viability Assay

Cell Line:

Gastric cancer cell lines with wild-type p53 (MKN-45, NUGC-4, and SUN-1 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:	0.2, 1, 5, 10, and 20 μ M for 3 days
	Applications:	Nutlin-3 (10 μ M, and 20 μ M) suppressed the growth and induced apoptosis of gastric cancer cells with wild-type p53.
In Vivo	Animal experiment	
	Animal models:	SMMC7721/As orthotopic hepatic tumor model; Xenograft model of MKN-45 cells injected s.c. into the right flank of mice under anesthesia.
	Dosage form:	200 mg/kg, p.o., twice a day, for 28 days; or 40 mg/kg, i.p., every 2 days for 2 weeks
	Applications:	Nutlin-3 potentiated the antitumor effects of arsenic trioxide in an orthotopic hepatic tumor model and inhibited the metastasis to lung. Moreover, nutlin-3 (40 mg/kg) showed antitumor activity in a xenograft model of a gastric cancer cell line (MKN-45) with wild-type p53 and amplified human homolog of murine double minute 2 (MDM2).
	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

See more customer validations on www.apexbt.com.

References

- Vassilev, L. T., Vu, B. T., Graves, B., Carvajal, D., Podlaski, F., Filipovic, Z., Kong, N., Kammlott, U., Lukacs, C., Klein, C., Fotouhi, N. and Liu, E. A. (2004) In vivo activation of the p53 pathway by small-molecule antagonists of MDM2. *Science*. 303, 844-8482
- Endo, S., Yamato, K., Hirai, S., Moriwaki, T., Fukuda, K., Suzuki, H., Abei, M., Nakagawa, I. and Hyodo, I. (2011) Potent in vitro and in vivo antitumor effects of MDM2 inhibitor nutlin-3 in gastric cancer cells. *Cancer Sci*. 102, 605-613
- Zheng, T., Yin, D., Lu, Z., Wang, J., Li, Y., Chen, X., Liang, Y., Song, X., Qi, S., Sun, B., Xie, C., Meng, X., Pan, S., Liu, J., Jiang, H. and Liu, L. (2014) Nutlin-3 overcomes arsenic trioxide resistance and tumor metastasis mediated by mutant p53 in Hepatocellular Carcinoma. *Mol Cancer*. 13, 133

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. 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.



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