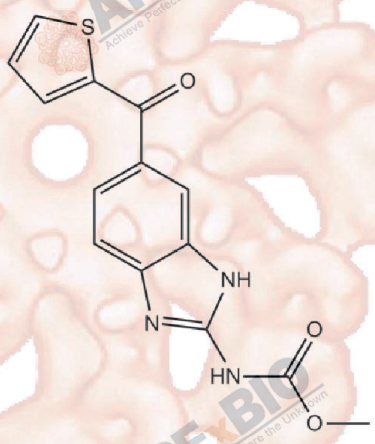
Product Name: Nocodazole
Revision Date: 01/13/2025

Product Data Sheet

Nocodazole



Cat. No.: A8487
CAS No.: 31430-18-9
Formula: C14H11N3O3S
M.Wt: 301.32
Synonyms:
Target: Ubiquitination/ Proteasome
Pathway: Autophagy
Storage: Store at -20°C

Solvent & Solubility

In Vitro

insoluble in H2O; insoluble in EtOH; ⩾15.066 mg/mL in DMSO

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	3.3187 mL	16.5937 mL	33.1873 mL
5 mM	0.6637 mL	3.3187 mL	6.6375 mL
10 mM	0.3319 mL	1.6594 mL	3.3187 mL

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

Biological Activity

Shortsummary	Tubulin production inhibitor,anti-neoplastic agent
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	SH-SY5Y cells, NRK fibroblasts
Preparation method:	The solubility of this compound in DMSO is >15.1mg/mL. 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:	25 nM to 400 nM, 1 μM; 30 min
	Applications:	In SH-SY5Y cells, Nocodazole (1 μM) disrupted microtubules by binding to β-tubulin, prevented the formation of one of the two interchain disulfide linkages and impaired the transport of vesicles. Nocodazole significantly attenuated METH-induced cell death and lysosomal dysfunction. Nocodazole (400 nM) completely inhibited cell locomotion that was maintained throughout the nocodazole treatment (>2 hours). Nocodazole treatment resulted in a dose-dependent decrease in the rate of locomotion. Nocodazole (25 nM, 100 nM) significantly inhibited cell locomotion.
In Vivo	**Animal experiment**	
	Animal models:	Athymic mice bearing COLO 205 tumor xenografts
	Dosage form:	5 mg/kg/three times per week
	Applications:	The antitumor effects of nocodazole were significantly potentiated by ketoconazole in mice after 6 wk of treatment. No gross signs of toxicity were observed in mice receiving these treatments.
	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. Wang H, Liu W, et al. "Inhibitor analysis revealed that clathrin-mediated endocytosis is involed in cellular entry of type III grasscarp reovirus." Virol J. 2018 May 24;15(1):92.PMID:29793525

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References

[1]. Liao G, Nagasaki T, Gundersen G G. Low concentrations of nocodazole interfere with fibroblast locomotion without significantly affecting microtubule level: implications for the role of dynamic microtubules in cell locomotion[J]. Journal of Cell Science, 1995, 108(11): 3473-3483.

[2]. Liao G, Nagasaki T, Gundersen G G. Low concentrations of nocodazole interfere with fibroblast locomotion without significantly affecting microtubule level: implications for the role of dynamic microtubules in cell locomotion[J]. Journal of Cell Science, 1995, 108(11): 3473-3483.

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.

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