

Nocodazole

Catalog No: tcsc1893



Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg



Specifications

CAS No:

31430-18-9

Formula:

$C_{14}H_{11}N_3O_3S$

Pathway:

Cell Cycle/DNA Damage;Cytoskeleton;Protein Tyrosine Kinase/RTK;Autophagy;Cell Cycle/DNA Damage

Target:

Microtubule/Tubulin;Microtubule/Tubulin;Bcr-Abl;Autophagy;CRISPR/Cas9

Purity / Grade:

>98%

Solubility:

DMSO : 20 mg/mL (66.37 mM; Need ultrasonic)

Alternative Names:

Oncodazole;R17934

Observed Molecular Weight:

301.32

Product Description

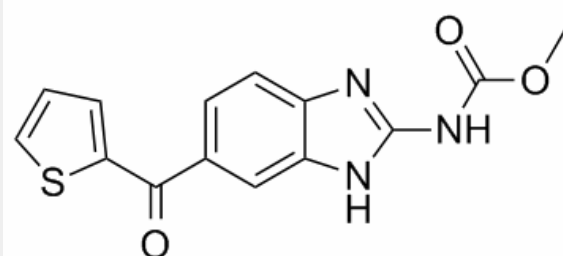
Nocodazole is a rapidly-reversible inhibitor of **microtubule** polymerization, which exhibits good potency against ABL, ABL(E255K), and ABL(T315I) with **IC₅₀** values of 0.21 μ M, 0.53 μ M, and 0.64 μ M, respectively, and increases **CRISPR/Cas9**-mediated editing frequencies.

IC50 & Target: IC50: 0.21 μ M (ABL), 0.53 μ M (ABL E255K), 0.64 μ M (ABL T315I)^[1]

Microtubule^[2], CRISPR/Cas9^[6]

In Vitro: Nocodazole exhibits good affinity toward c-KIT, with a K_d value of 1.6 μ M in highly malignant human cancer cells. Nocodazole displays good binding affinity toward the components of the mitogen-activated protein kinase (MAPK) pathway, such as BRAF (K_d =1.8 μ M), BRAF(V600E) (K_d =1.1 μ M), MEK1 (K_d =1.7 μ M), and MEK2 (K_d =1.6 μ M)^[1]. Nocodazole has the highest affinity for $\alpha\beta_{IV}$ and the lowest affinity for $\alpha\beta_{III}$ ^[2]. After release from the nocodazole block, cells synchronized in mitosis remain sensitive to very low concentrations of paclitaxel for 90 min^[3]. Nocodazole (1 nM) induces apoptosis of COLO 205 cancer cells^[4]. Nocodazole (\geq 30 μ g/mL) significantly increases the percentage of annexin-V-binding cells without significantly modifying average forward scatter of human erythrocytes^[5].

In Vivo: Nocodazole (5 mg/kg/three times per week, i.p.) has antitumor effects in athymic mice bearing COLO 205 tumor xenografts. Nocodazole (1 nM) + ketoconazole dramatically increase the levels of p21/CIP1 and p27/KIP1 protein in the tumor tissues^[4].



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