

NSC624206

## Chemical Properties

CAS No. : 13116-77-3  
 Formula: C19H33Cl2NS2  
 Molecular Weight: 410.51  
 Storage: Keep away from moisture,  
 Powder: -20°C for 3 years | In solvent: -80°C for 1 year  
*Actual storage temperature shall be subject to the COA.*

## Biological Description

Description	NSC624206 (N-(2-((p-Chlorobenzyl)dithio)ethyl)decylamine hydrochloride) is an asymmetric disulfide small molecule that acts as a selective inhibitor of the ubiquitin-activating enzyme E1 (UBA1). It effectively blocks the in vitro ubiquitination-mediated degradation of the cell cycle regulator p27 and induces the accumulation of p27 protein in the HepG2 liver cancer cell model.
Targets(IC50)	E1/E2/E3 Enzyme
In vitro	<p>Method: Human hepatocellular carcinoma HepG2 cells were treated with NSC624206 (1-10 <math>\mu</math>M) for 24 h. Western blotting was performed to detect endogenous p27 protein expression levels.          Result: NSC624206 induced the accumulation of p27 protein in HepG2 cells in a dose-dependent manner [1].</p> <p>Method: Mink lung epithelial Kip16 cells stably expressing GFP-p27 were treated with NSC624206 (1-10 <math>\mu</math>M) for 24 h. Fluorescence microscopy and Western blotting were used to detect GFP-p27 expression levels.          Result: NSC624206 treatment induced uniform and stable accumulation of GFP-p27 in Kip16 cells, with a significant increase in GFP-p27 levels observed at 1 <math>\mu</math>M [1].</p> <p>Method: In vitro E1/E2 thioester formation reactions were assembled containing fluorescein-labeled ubiquitin, E1, E2, and ATP. NSC624206 (1-50 <math>\mu</math>M) was added, and the formation of E1-ubiquitin and E2-ubiquitin thioester adducts was detected by non-reducing SDS-PAGE.          Result: NSC624206 inhibited the formation of the E1-ubiquitin thioester bond with an IC50 of approximately 9 <math>\mu</math>M, without significantly affecting E2 activity [1].</p>

### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	2.436 mL	12.180 mL	24.3599 mL
5 mM	0.4872 mL	2.436 mL	4.872 mL
10 mM	0.2436 mL	1.218 mL	2.436 mL
50 mM	0.0487 mL	0.2436 mL	0.4872 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Dana Ungermannova, et al. Identification and Mechanistic Studies of a Novel Ubiquitin E1 Inhibitor. J Biomol Screen . 2012 Apr;17(4):421-34.

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