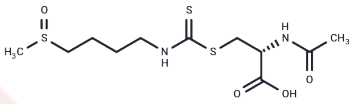
# Data Sheet (Cat.No.T36614)

TargetMol

## DL-Sulforaphane N-acetyl-L-cysteine

### Chemical Properties



CAS No. : 334829-66-2

Formula: C11H20N2O4S3

Molecular Weight: 340.48

Storage: Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

### Biological Description

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|---|---|
| Description | DL-Sulforaphane N-acetyl-L-cysteine (SFN-NAC), a metabolite of sulforaphane, induces apoptosis through down-regulation of α-microtubulin and phosphorylation of ERK1/2-mediated Stathmin-1, and up-regulation of Hsp70 through phosphorylation of ERK1/2 in non-small-cell lung cancer (NSCLC). |
| Targets(IC50) | Apoptosis,ERK,HSP,HDAC,Drug Metabolite |
| In vitro | In studies on U87MG and U373MG cells, treatment with DL-Sulforaphane N-acetyl-L-cysteine (30 μM) for 24 hours resulted in cell cycle analysis showing drug-induced G2/M phase arrest, along with the initiation of apoptosis. In the same cell lines, Western blot analysis revealed that DL-Sulforaphane N-acetyl-L-cysteine, within a concentration range of 10 to 50 μM, activated ERK1/2 (Thr202/Tyr204), downregulated α-tubulin, and induced autophagy in a dose-dependent manner. Additionally, cell viability assays showed that DL-Sulforaphane N-acetyl-L-cysteine, within a concentration range of 0 to 90 μM, decreased the viability of HA cells, U87MG cells, and U373MG cells in a dose-dependent manner, with IC50 values of 60.08 μM, 35.20 μM, and 39.11 μM, respectively [1]. |
| In vivo | In the HDAC inhibition model, DL-Sulforaphane N-acetyl-L-cysteine (10 μmol, oral gavage, single dose, 6-hour treatment) significantly inhibited histone deacetylase (HDAC) activity in the colon mucosa of mice[2]. |

### Solubility Information

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|---|---|
| Solubility | DMSO: 8 mg/mL (23.5 mM),Sonication is recommended.<br>PBS (pH 7.2): 8 mg/mL (23.5 mM),Sonication is recommended.<br>Ethanol: 4 mg/mL (11.75 mM),Sonication is recommended.<br>DMF: 8 mg/mL (23.5 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 2.937 mL | 14.6852 mL | 29.3703 mL |
| 5 mM | 0.5874 mL | 2.937 mL | 5.8741 mL |
| 10 mM | 0.2937 mL | 1.4685 mL | 2.937 mL |
| 50 mM | 0.0587 mL | 0.2937 mL | 0.5874 mL |

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

Liu HJ,et al.Sulforaphane-N-Acetyl-Cysteine Induces Autophagy Through Activation of ERK1/2 in U87MG and U373MG Cells.Cell Physiol Biochem.2018;51(2):528-542.
Dashwood RH,et al.Dietary histone deacetylase inhibitors: from cells to mice to man.Semin Cancer Biol.2007 Oct;17(5):363-9.