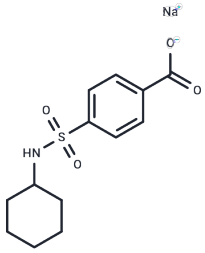
# Data Sheet (Cat.No.T3589)

TargetMol

## NSC23005 Sodium

### Chemical Properties



CAS No. : 1796596-46-7

Formula: C13H16NNaO4S

Molecular Weight: 305.32

Storage: 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 | NSC23005 sodium is a novel and effective p18 inhibitor (ED50=5.21 nM) that promotes Hematopoietic stem cells (HSCs) expansion in both murine and human models. |
| Targets(IC50) | Others,CDK |
| In vitro | NSC23005 sodium is a novel class of INK4C (p18INK4C or p18) small molecule inhibitor (p18SMIs), which is initially found by in silico 3D screening. NSC23005 sodium shows the most potent bioactivity in hematopoietic stem cells (HSCs) expansion (ED50=5.21 nM). Notably, NSC23005 sodium does not show significant cytotoxicity toward 32D cells or HSCs, nor does it augment leukemia cell proliferation. NSC23005 sodium (ED50=5.21 nM), shows no activity in promoting the proliferation of leukemia cells. |
| In vivo | NSC23005 sodium selectively promotes HSC division by inhibiting p18, thereby activating CDK4/6. This novel and effective p18 inhibitor enhances HSC expansion in both murine and human models without significant cytotoxicity toward HSCs, and it does not augment leukemia cell proliferation. |
| Cell Research | NSC23005 sodium is dissolved in DMSO and stored, and then diluted with appropriate medium before use[1]. c-Kit enriched bone marrow (BM) cells are cultured for 5 days with cytokine combination plus NSC23005 sodium or DMSO. As positive controls, primary uncultured bone marrow cells are treated by ultraviolet radiation (UV) for 10 minutes prior to the staining process for apoptosis analysis. Apoptosis and cell death are measured by AnnexinV and DAPI staining in the Annexin V-FITC Apoptosis Detection Kit. Apoptosis is measured on an FACS analyzer. The data is analyzed using FlowJo software [1]. |

### Solubility Information

| | |
|---|---|
| Solubility | DMSO: 60 mg/mL (196.52 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 3.2753 mL | 16.3763 mL | 32.7525 mL |
| 5 mM | 0.6551 mL | 3.2753 mL | 6.5505 mL |
| 10 mM | 0.3275 mL | 1.6376 mL | 3.2753 mL |
| 50 mM | 0.0655 mL | 0.3275 mL | 0.6551 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

Xie XQ, et al. Discovery of novel INK4C small-molecule inhibitors to promote human and murine hematopoietic stem cell ex vivo expansion. Sci Rep. 2015 Dec 18;5:18115.