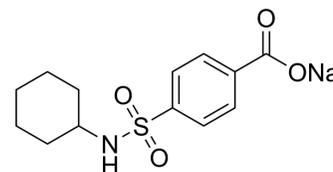


NSC23005 sodium

Cat. No.:	HY-100791
CAS No.:	1796596-46-7
Molecular Formula:	C ₁₃ H ₁₆ NNaO ₄ S
Molecular Weight:	305.33
Target:	Others
Pathway:	Others
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H₂O : ≥ 100 mg/mL (327.51 mM)
 DMSO : 6.4 mg/mL (20.96 mM; Need ultrasonic)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
	1 mM		3.2751 mL	16.3757 mL	32.7515 mL
	5 mM		0.6550 mL	3.2751 mL	6.5503 mL
	10 mM		0.3275 mL	1.6376 mL	3.2751 mL

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

BIOLOGICAL ACTIVITY

Description

NSC23005 sodium is a novel and effective p18 inhibitor (ED₅₀=5.21 nM) in promoting Hematopoietic stem cells (HSCs) expansion in both murine and human models.

IC₅₀ & Target

ED₅₀: 5.21 nM (p18^{INK4C})^[1]

In Vitro

NSC23005 sodium (Compound 40) is a novel class of INK4C (p18^{INK4C} 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^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

NSC23005 sodium selectively promote HSCs division by inhibiting p18, thereby activating CDK4/6. NSC23005 sodium is a novel and effective p18 inhibitor in promoting HSCs expansion in both murine and human models^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay ^[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]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Death Dis. 2019 Mar 20;10(4):271.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. 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.

Caution: Product has not been fully validated for medical applications. For research use only.

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