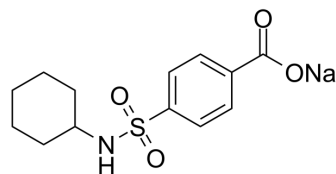


NSC23005 sodium

| | |
|---------------------------|--|
| 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 | DMSO : 6.4 mg/mL (20.96 mM; Need ultrasonic) | | | | | |
| | | Solvent Concentration | Mass | | | |
| | Preparing Stock Solutions | | | 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 (ED ₅₀ =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 (ED ₅₀ =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 (ED ₅₀ =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.

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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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