

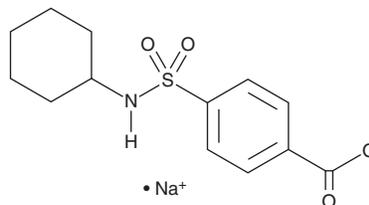
PRODUCT INFORMATION



NSC 23005 (sodium salt)

Item No. 23327

CAS Registry No.: 1796596-46-7
Formal Name: 4-[(cyclohexylamino)sulfonyl]-benzoic acid, monosodium salt
MF: C₁₃H₁₆NO₄S • Na
FW: 305.3
Purity: ≥98%
UV/Vis.: λ_{max}: 202, 239 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

NSC 23005 (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the NSC 23005 (sodium salt) in the solvent of choice, which should be purged with an inert gas. NSC 23005 (sodium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of NSC 23005 (sodium salt) in ethanol and DMF is approximately 0.2 mg/ml and approximately 1 mg/ml in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of NSC 23005 (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of NSC 23005 (sodium salt) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

NSC 23005 is a small molecule inhibitor of p18, as determined by an *in silico* screen.¹ It promotes expansion of murine and human hematopoietic stem cells (HSCs) with an ED₅₀ value of 5.21 nM in a single-cell *in vitro* culture assay using isolated murine bone marrow cells. NSC 23005 increases the number of long-term HSCs following treatment with a CDK2 inhibitor but not a CDK4/6 inhibitor, indicating that it mediates its effects by blocking p18 inhibition of CDK4/6. It increases HSC proliferation without affecting differentiation, inducing cytotoxicity, or affecting leukemia cell proliferation.

Reference

1. Xie, X.Q., Yang, P., Zhang, Y., *et al.* Discovery of novel INK4C small-molecule inhibitors to promote human and murine hematopoietic stem cell *ex vivo* expansion. *Sci. Rep.* **5**, 18115 (2015).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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