

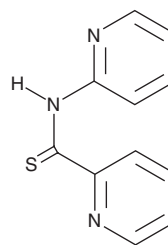
PRODUCT INFORMATION



NSC 185058

Item No. 23957

CAS Registry No.: 39122-38-8
Formal Name: N-2-pyridinyl-2-pyridinecarbothioamide
MF: C₁₁H₉N₃S
FW: 215.3
Purity: ≥98%
UV/Vis.: λ_{max}: 234, 294, 340 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 185058 is supplied as a crystalline solid. A stock solution may be made by dissolving the NSC 185058 in the solvent of choice, which should be purged with an inert gas. NSC 185058 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of NSC 185058 in ethanol is approximately 2.5 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Description

NSC 185058 is an inhibitor of ATG4B, a cysteine protease that activates LC3B during the initiation of autophagy.¹ It inhibits ATG4B cleavage of LC3B-GST (IC₅₀ = 51 μM) and reduces LC3B lipidation induced by starvation in Saos-2 cells. NSC 185058 (100 μM) reduces starvation-induced autophagy and prevents autophagic vacuole formation in Saos-2 and MDA-MB-468 cells. It decreases phosphorylation of ribosomal protein S6 (RPS6) only marginally and does not affect phosphatidylinositol 3-kinase (PI3K) activity, indicating a direct role on ATG4B rather than through the mammalian target of rapamycin (mTOR) and PI3K signaling pathways. NSC 185058 (100 mg/kg) decreases autophagic vacuoles *in vivo* in mouse liver, inhibits tumor growth in an osteosarcoma nude mouse xenograft model, and decreases the number of autophagic vacuoles in osteosarcoma tumors.

Reference

1. Akin, D., Wang, S.K., Habibzadegah-Tari, P., *et al.* A novel ATG4B antagonist inhibits autophagy and has a negative impact on osteosarcoma tumors. *Autophagy* **10(11)**, 2021-2035 (2014).

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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