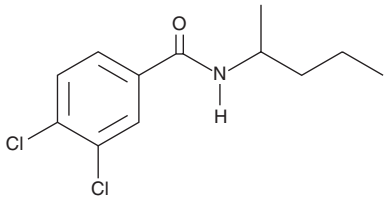
PRODUCT INFORMATION

NSC 405020

Item No. 14859

CAS Registry No.:	7497-07-6
Formal Name:	3,4-dichloro-N-(1-methylbutyl)-benzamide
MF:	$C_{12}H_{15}Cl_2NO$
FW:	260.2
Purity:	≥98%
UV/Vis.:	λ_{max}: 238 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 405020 is supplied as a crystalline solid. A stock solution may be made by dissolving the NSC 405020 in the solvent of choice. NSC 405020 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of NSC 405020 in ethanol and DMF is approximately 30 mg/ml and 20 mg/ml in DMSO.

NSC 405020 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, NSC 405020 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. NSC 405020 has a solubility of approximately 0.25 mg/ml in a 1:3 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

NSC 405020 binds to the hemopexin (PEX) domain of the membrane type-1 matrix metalloproteinase (MT_1-MMP/MMP-14).[1] It disrupts MT_1-MMP homodimerization without affecting its catalytic activity in an assay using the MT_1-MMP CAT domain, which is involved in its tumor promoting function (IC_{50} > 100 µM). In a mouse tumor xenograft model, it reduces tumor growth through a cell death-independent mechanism when injected intratumorally at a dose of 0.5 mg/kg three times per week for two weeks. NSC 405020 (1 µM) applied to HSC5 cells prevents arsenic-mediated invasion while also decreasing the expression of MT1-MMP and pERK.[2]

References

1. Remacle, A.G., Golubkov, V.S., Shiryaev, S.A., *et al.* Novel MT_1-MMP small-molecule inhibitors based on insights into hemopexin domain function in tumor growth. *Cancer Res.* **72(9)**, 2339-2349 (2012).
2. Thang, N.D., Yajima, I., Kumasaka, M.Y., *et al.* Bidirectional functions of arsenic as a carcinogen and an anti-cancer agent in human squamous cell carcinoma. *PLoS One* **9(5)**, e96945 (2014).

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