

PRODUCT INFORMATION



NCT-503

Item No. 19718

CAS Registry No.: 1916571-90-8

Formal Name: N-(4,6-dimethyl-2-pyridinyl)-4-[[4-(trifluoromethyl)phenyl]methyl]-1-piperazinecarbothioamide

MF: $C_{20}H_{23}F_3N_4S$

FW: 408.5

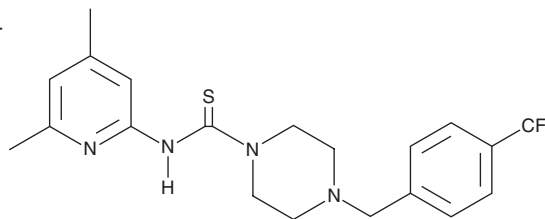
Purity: $\geq 98\%$

UV/Vis.: λ_{max} : 284 nm

Supplied as: A neat solid

Storage: $-20^{\circ}C$

Stability: ≥ 4 years



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

Laboratory Procedures

NCT-503 is supplied as a neat solid. A stock solution may be made by dissolving the NCT-503 in the solvent of choice. NCT-503 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of NCT-503 in these solvents is approximately 1, 10, 25 mg/ml.

NCT-503 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, NCT-503 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. NCT-503 has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

NCT-503 is an inhibitor of 3-phosphoglycerate dehydrogenase (PHGDH), inhibiting serine synthesis from 3-phosphoglycerate in cells with an IC_{50} value of $2.5 \mu M$.¹ It has been shown to reduce the production of glucose-derived serine in cells and to suppress the growth of PHGDH-dependent MDA-MB-468 cancer cells both *in vitro* and in mice bearing orthotopic xenograft tumors.¹

Reference

1. Pacold, M.E., Brimacombe, K.R., Chan, S.H., *et al.* A PHGDH inhibitor reveals coordination of serine synthesis and one-carbon unit fate. *Nat. Chem. Biol.* **12**(6), 452-458 (2016).

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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