

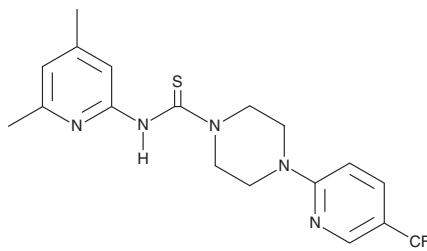
# PRODUCT INFORMATION



## NCT-502

Item No. 19716

**CAS Registry No.:** 1542213-00-2  
**Formal Name:** N-(4,6-dimethyl-2-pyridinyl)-4-[5-(trifluoromethyl)-2-pyridinyl]-1-piperazinecarbothioamide  
**MF:** C<sub>18</sub>H<sub>20</sub>F<sub>3</sub>N<sub>5</sub>S  
**FW:** 395.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 259, 284 nm 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

NCT-502 is supplied as a crystalline solid. A stock solution may be made by dissolving the NCT-502 in the solvent of choice. NCT-502 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of NCT-502 in these solvents is approximately 1, 10, and 25 mg/ml.

NCT-502 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, NCT-502 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. NCT-502 has a solubility of approximately 0.33 mg/ml in a 1:10 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

NCT-502 is an inhibitor of 3-phosphoglycerate dehydrogenase (PHGDH), inhibiting serine synthesis from 3-phosphoglycerate in cells with an IC<sub>50</sub> value of 3.7 μM.<sup>1</sup> It is inactive against a panel of other dehydrogenases and shows minimal cross reactivity with G protein-coupled receptors. NCT-502 reversibly blocks the production of glucose-derived serine in cells and displays reasonable *in vitro* absorption, distribution, metabolism, and excretion.<sup>1</sup>

### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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