

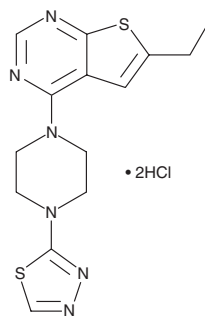
PRODUCT INFORMATION



MI-nc (hydrochloride)

Item No. 11621

CAS Registry No.: 1934302-23-4
Formal Name: 6-ethyl-4-[4-(1,3,4-thiadiazol-2-yl)-1-piperazinyl]-thieno[2,3-d]pyrimidine, dihydrochloride
MF: C₁₄H₁₆N₆S₂ • 2HC
FW: 405.4
Purity: ≥98%
UV/Vis.: λ_{max}: 223, 285 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

MI-nc (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the MI-nc (hydrochloride) in the solvent of choice, which should be purged with an inert gas. MI-nc (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of MI-nc (hydrochloride) in these solvents is approximately 0.1, 1.3, and 0.5 mg/ml, respectively.

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 MI-nc (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of MI-nc (hydrochloride) in PBS (pH 7.2) is approximately 0.16 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Menin, a product of the multiple endocrine neoplasia gene, is an essential component of histone methyltransferase complexes involving the mixed lineage leukemia (MLL) gene product.^{1,2} Also, the leukemogenic activity of MLL fusion proteins depends on their direct interaction with menin.³ MI-nc is a weak inhibitor of the menin-MLL fusion protein interaction (IC₅₀ = 193 μM).³ It is intended as a negative control compound for tests involving MI-2 (Item No. 11620), which more potently binds menin, blocks the menin-MLL interaction (IC₅₀ = 0.45 μM), and induces apoptosis in cells expressing MLL fusion proteins.³

References

1. Chandrasekharappa, S.C., Guru, S.C., Manickam, P., *et al.* Positional cloning of the gene for multiple endocrine neoplasia-type 1. *Science* **276**(5311), 404-407 (1997).
2. Guccione, E., Bassi, C., Casadio, F., *et al.* Methylation of histone H3R2 by PRMT6 and H3K4 by an MLL complex are mutually exclusive. *Nature* **449**(7164), 933-937 (2007).
3. Grembecka, J., He, S., Shi, A., *et al.* Menin-MLL inhibitors reverse oncogenic activity of MLL fusion proteins in leukemia. *Nat. Chem. Biol.* **8**(3), 277-284 (2012).

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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