

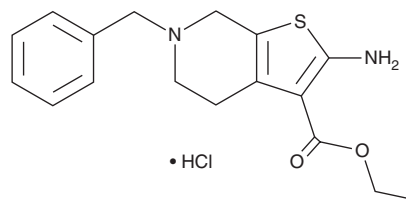
PRODUCT INFORMATION



Tinoridine (hydrochloride)

Item No. 42963

CAS Registry No.: 25913-34-2
Formal Name: 2-amino-4,5,6,7-tetrahydro-6-(phenylmethyl)-thieno[2,3-c]pyridine-3-carboxylic acid, ethyl ester, monohydrochloride
Synonym: Y-3642
MF: C₁₇H₂₀N₂O₂S • HCl
FW: 352.9
Purity: ≥98%
Supplied as: A 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

Tinoridine (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the tinoridine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Tinoridine (hydrochloride) is soluble (≥10 mg/ml) in DMSO.

Description

Tinoridine is an inhibitor of ferroptosis.¹ It inhibits ferroptosis induced by (1S,3R)-RSL3 (Item No. 19288) in primary rat nucleus pulposus cells when used at concentrations of 1.25 or 2.5 μM. Tinoridine also scavenges DPPH (Item No. 14805) radicals in a cell-free assay in a concentration-dependent manner and inhibits superoxide dismutase (Sod) and catalase activities in primary rat liver microsomes when used at concentrations of 10 and 250 μg/ml, respectively.² It inhibits carbon tetrachloride-induced increases in hepatic levels of cytochrome P450 (Cyp450) and glucose-6-phosphatase (G6pc), serum levels of alanine transaminase (ALT) and aspartate aminotransferase (AST), and hepatic necrosis in a mouse model of liver damage when administered at a dose of 100 mg/kg.³ Tinoridine inhibits puncture-induced increases in disc malformation and decreases in disc height in a rat model of intervertebral disc degeneration (IVDD).¹ It increases IVD cell levels of collagen II, glutathione peroxidase 4 (Gpx4), and nuclear factor erythroid 2-related factor 2 (Nrf2) and reduces IVD cell levels of matrix metalloproteinase-13 (Mmp-13) in the same model.

References

1. Yang, S., Zhu, Y., Shi, Y., *et al.* Screening of NSAIDs library identifies Tinoridine as a novel ferroptosis inhibitor for potential intervertebral disc degeneration therapy. *Free. Radic. Biol. Med.* **221**, 245-256 (2024).
2. Shimada, O., and Yasuda, H. Hydroxyl radical scavenging action of tinoridine. *Agents Actions* **19(3-4)**, 208-214 (1986).
3. Yasuda, H., Izumi, N., Shimada, O., *et al.* The protective effect of tinoridine against carbon tetrachloride hepatotoxicity. *Toxicol. Appl. Pharmacol.* **52(3)**, 407-413 (1980).

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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