

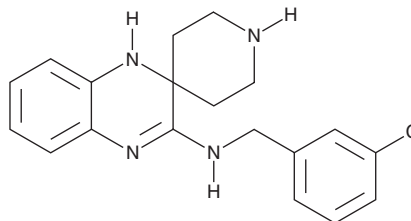
PRODUCT INFORMATION



Liproxstatin-1

Item No. 17730

CAS Registry No.: 950455-15-9
Formal Name: N-[(3-chlorophenyl)methyl]-spiro[piperidine-4,2'-(1'H)-quinoxalin]-3'-amine
MF: C₁₉H₂₁ClN₄
FW: 340.9
Purity: ≥95%
UV/Vis.: λ_{max}: 232, 276, 314 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

Liproxstatin-1 is supplied as a crystalline solid. A stock solution may be made by dissolving the liproxstatin-1 in the solvent of choice. Liproxstatin-1 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of liproxstatin-1 in these solvents is approximately 5, 16, and 25 mg/ml, respectively.

Description

Liproxstatin-1 is a ferroptosis inhibitor.¹ It inhibits ferroptotic cell death (IC₅₀ = 22 nM) and lipid peroxidation in mouse embryonic fibroblasts (MEFs) with an inducible knockdown of glutathione peroxidase 4 (Gpx4^{-/-} MEFs) when used at a concentration of 50 nM. Liproxstatin-1 also inhibits ferroptosis induced by the ferroptosis-inducing agents L-buthionine sulphoximine (BSO), erastin (Item No. 17754), and (1S,3R)-RSL3 (Item No. 19288) in a concentration-dependent manner in MEFs, but does not inhibit necroptosis, apoptosis, or necrosis. It inhibits cell death and lipid peroxidation induced by (1S,3R)-RSL3 in human renal proximal tubule epithelial cells. Liproxstatin-1 (10 mg/kg) increases survival and decreases TUNEL⁺ kidney cells in inducible Gpx4^{-/-} mice and reduces tissue injury in a mouse model of hepatic ischemia/reperfusion injury. It is also an antioxidant that inhibits autooxidation of lipids by trapping peroxy radicals.²

References

1. Friedmann Angeli, J.P., Schneider, M., Proneth, B., *et al.* Inactivation of the ferroptosis regulator Gpx4 triggers acute renal failure in mice. *Nat. Cell. Biol.* **16**(12), 1180-1191 (2014).
2. Zilka, O., Shah, R., Li, B., *et al.* On the mechanism of cytoprotection by ferrostatin-1 and liproxstatin-1 and the role of lipid peroxidation in ferroptotic cell death. *ACS Cent. Sci.* **3**(3), 232-243 (2017).

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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