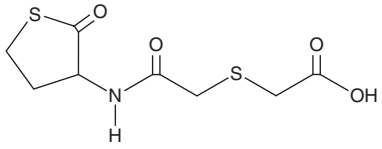
PRODUCT INFORMATION

Erdosteine

Item No. 29177

CAS Registry No.: 84611-23-4
Formal Name: 2-[[2-oxo-2-[(tetrahydro-2-oxo-3-thienyl) amino]ethyl]thio]-acetic acid
Synonym: Erdostin
MF: $C_8H_{11}NO_4S_2$
FW: 249.3
Purity: ≥98%
UV/Vis.: λ_{max}: 235 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

Erdosteine is supplied as a crystalline solid. A stock solution may be made by dissolving the erdosteine in the solvent of choice, which should be purged with an inert gas. Erdosteine is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of erdosteine in these solvents is approximately 30 and 25 mg/ml, respectively.

Erdosteine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, erdosteine should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Erdosteine has a solubility of approximately 0.16 mg/ml in a 1:5 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Erdosteine is a mucolytic agent and an antioxidant.[1-3] It inhibits LPS-induced IκB kinase (IKK) activity, NF-κB-mediated transcription, and production of IL-6 and IL-1β in RAW 264.7 cells.[1] Erdosteine (7.5 mg/kg) prevents depletion of renal catalase and glutathione peroxidase (GPX) and increases in renal malondialdehyde (MDA) and nitric oxide (NO) levels in a rat model of nephrotoxicity induced by cisplatin (Item No. 13119).[2] It reduces spinal cord lipid peroxidation and destruction of spinal motor neurons in a rabbit model of spinal cord ischemia and reperfusion injury induced by thoracoabdominal aortic clamping. Erdosteine (150 mg/kg) reduces lung weight, MDA and protein carbonyl levels, and macrophage and neutrophil accumulation in a mouse model of acute lung injury induced by oleic acid (Item Nos. 90260 | 24659).[3] Formulations containing erdosteine have been used in the treatment of chronic obstructive pulmonary disease (COPD).

References

1. Park, J.S., Park, M.Y., Cho, Y.J., *et al.* Anti-inflammatory effect of erdosteine in lipopolysaccharide-stimulated RAW 264.7 cells. *Inflammation* **39(4),** 1573-1581 (2016).
2. Moretti, M. and Marchioni, C.F. An overview of erdosteine antioxidant activity in experimental research. *Pharmacol. Res.* **55(4),** 249-254 (2007).
3. Erdem, A., Gedikli, E., Yersal, N., *et al.* Protective role of erdosteine pretreatment on oleic acid-induced acute lung injury. *J. Surg. Res.* **213**, 234-242 (2017).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM