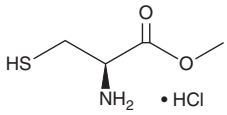
PRODUCT INFORMATION

Mecysteine (hydrochloride)

Item No. 34847

CAS Registry No.: 18598-63-5
Formal Name: L-cysteine, methyl ester, monohydrochloride
Synonym: NSC 161611
MF: $C_4H_9NO_2S \bullet HCl$
FW: 171.6
Purity: ≥95%
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

Mecysteine (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the mecysteine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Mecysteine (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of mecysteine (hydrochloride) in these solvents is approximately 1, 15, and 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 mecysteine (hydrochloride) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of mecysteine (hydrochloride) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Mecysteine is a methyl ester form of the conditionally essential amino acid L-cysteine (Item No. 33309). It increases the output of respiratory tract fluid in anesthetized dogs when administered at doses of 30 and 100 mg/kg.[1] Mecysteine has also been used in the synthesis of free fatty acid receptor 2 (FFAR2/GPR43) agonists.[2] Formulations containing mecysteine have been used in the treatment of chronic obstructive pulmonary disease (COPD) and chronic bronchitis.

References

1. Yanaura, S., Takeda, H., and Misawa, M. Behavior of mucus glycoproteins of tracheal secretory cells following L-cysteine methyl ester treatment. *J. Pharmacobiodyn* **5(8)**, 603-610 (1982).
2. Hansen, A.H., Sergeev, E., Bolognini, D., *et al*. Discovery of a potent thiazolidine free fatty acid receptor 2 agonist with favorable pharmacokinetic properties. *J. Med. Chem*. **61(21)**, 9534-9550 (2018).

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