

Product Data Sheet

Product Name: (-)-Levamisole (hydrochloride)

Cat. No.: GC45249

Chemical Properties

Cas. No. 16595-80-5

SMILES [H][C@]1(N=C(SCC2)N2C1)C3=CC=CC=C3.Cl

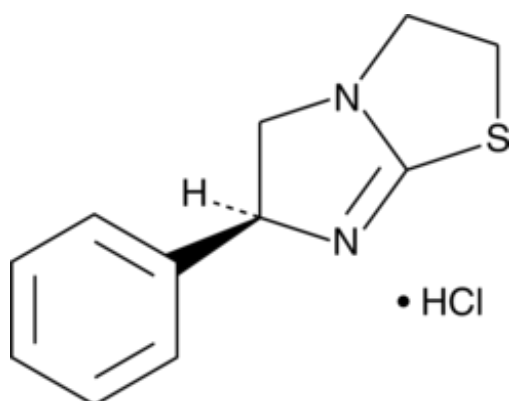
Formula C₁₁H₁₂N₂S•HCl M.Wt 240.8

Solubility Soluble in DMSO Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Levamisole hydrochloride is an anthelmintic and immunomodulator belonging to a class of synthetic imidazothiazole derivatives. IC₅₀ value: Target: Levamisole suppresses the production of white blood cells, resulting in neutropenia and agranulocytosis. With the increasing use of levamisole as an adulterant, a number of these complications have been reported among cocaine users [1] [2]. Levamisole reversibly and noncompetitively inhibits most isoforms of alkaline phosphatase (e.g., human liver, bone, kidney, and spleen) except the intestinal and placental isoform [3]. It is thus used as an inhibitor along with substrate to reduce background alkaline phosphatase activity in biomedical assays involving detection signal amplification by intestinal alkaline phosphatase, for example in situ hybridization or Western blot protocols. It is used to immobilize the nematode *C. elegans* on

Caution: Product has not been fully validated for medical applications. For research use only.

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glass slides for imaging.

References:

- [1]. Centers for Disease Control and Prevention (CDC). Agranulocytosis associated with cocaine use - four States, March 2008-November 2009. MMWR Morb Mortal Wkly Rep. 2009 Dec 18;58(49):1381-5.
- [2]. Zhu NY, et al. Agranulocytosis after consumption of cocaine adulterated with levamisole. Ann Intern Med. 2009 Feb 17;150(4):287-9.
- [3]. Van Belle H. Alkaline phosphatase. I. Kinetics and inhibition by levamisole of purified isoenzymes from humans. Clin Chem. 1976 Jul;22(7):972-6.

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