Taiclone®
Quality Guarantee

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Ethambutol (dihydrochloride)

Catalog No: tcsc2631

Available Sizes

Size: 1g

Size: 5g

Specifications

CAS No:
1070-11-7

Formula:
$C_{10}H_{26}Cl_2N_2O_2$

Pathway:
Anti-infection

Target:
Bacterial

Purity / Grade:
>98%

Solubility:
DMSO : 100 mg/mL (360.71 mM; Need ultrasonic); H2O : ≥ 50 mg/mL (180.36 mM)

Alternative Names:
Emb dihydrochloride

Observed Molecular Weight:
277.23

Product Description

Ethambutol Dihydrochloride is a bacteriostatic antimycobacterial agent, which obstructs the formation of cell wall by inhibiting arabinosyl transferases.

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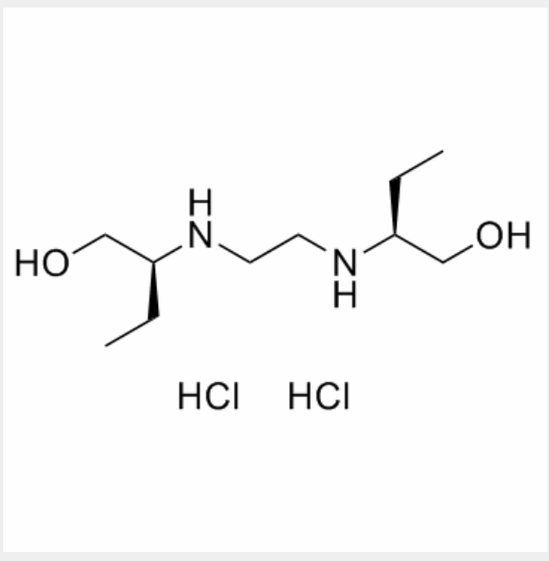
Target: Antibacterial

Ethambutol directly affects two polymers, arabinogalactan (AG) and lipoarabinomannan (LAM) in Mycobacterium smegmatis. In M. smegmatis, Ethambutol inhibits synthesis of arabinan completely and inhibits AG synthesis most likely as a consequence of this; more than 50% of the cell arabinan is released from the bacteria following Ethambutol treatment, whereas no galactan is released. Ethambutol main targets against embB gene product in M. avium. Ethambutol induces 60% changes in the embB gene in M. tuberculosis resistant mutants [1]. Ethambutol is effective against actively growing microorganisms of the genus Mycobacterium, including M. tuberculosis. Nearly all strains of M. tuberculosis and M. kansasii as well as a number of strains of the M. aviumcomplex (MAC) are sensitive to Ethambutol. [1] Ethambutol is potency against M. tuberculosis (H37Rv) with MIC of 0.5 μg/mL in vitro [2]. Ethambutol is efficient on treatment of mycobacterial-infected macrophages. When M. tuberculosis infected macrophages are treated with 6 μg/mL Ethambutol, the log CFUs following treatment for 3 days is 4.17, while value in control group is 4.8. The MICs for M. avium (MTCC 1723) and M. smegmatis (MTCC 6) are 15 μg/mL and 0.18 μg/mL, respectively. Ethambutol is efficient in animal model. 100 mg/kg Ethambutol given orally 15 days post i.v. infection 1 ×/week for 5 weeks, induces a lower log CFU compared with untreatment (4.59 vs 5.07) [3].



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