

Ethambutol

Catalog No: tcsc2630



Available Sizes

Size: 1g

Size: 5g



Specifications

CAS No:

74-55-5

Formula:

$C_{10}H_{24}N_2O_2$

Pathway:

Anti-infection

Target:

Bacterial

Purity / Grade:

>98%

Solubility:

10 mM in DMSO

Alternative Names:

Emb

Observed Molecular Weight:

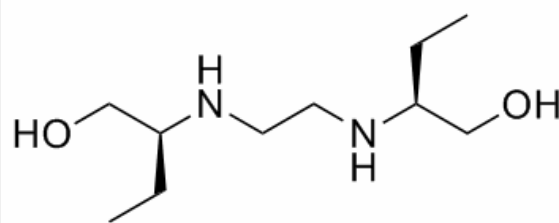
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Product Description

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

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. avium* complex (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 x/week for 5 weeks, induces a lower log CFU compared with untreatment (4.59 vs 5.07) [3].



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