

Isoniazid

Catalog No: tcsc2371



Available Sizes

Size: 100mg



Specifications

CAS No:

54-85-3

Formula:

$C_6H_7N_3O$

Pathway:

Anti-infection;Autophagy;Autophagy

Target:

Bacterial;Autophagy;Mitophagy

Purity / Grade:

>98%

Solubility:

DMSO : 50 mg/mL (364.59 mM; Need ultrasonic); H2O : 33.33 mg/mL (243.04 mM; Need ultrasonic)

Alternative Names:

INH;Isonicotinic acid hydrazide;Isonicotinic hydrazide

Observed Molecular Weight:

137.14

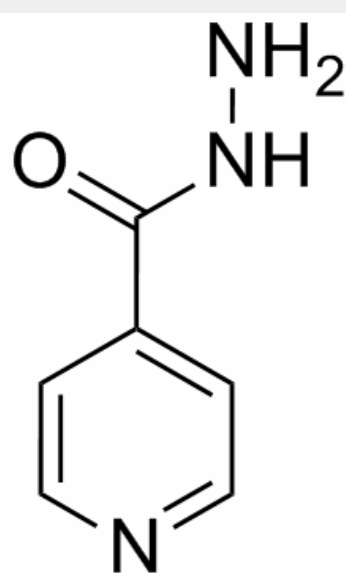
Product Description

Isoniazid is an antibacterial agent used primarily as a tuberculostatic.

Target: Antibacterial

Isoniazid is a prodrug and must be activated by a bacterial catalase-peroxidase enzyme that in M. tuberculosis is called KatG [1].

KatG couples the isonicotinic acyl with NADH to form isonicotinic acyl-NADH complex. This complex binds tightly to the enoyl-acyl carrier protein reductase known as InhA, thereby blocking the natural enoyl-AcpM substrate and the action of fatty acid synthase. This process inhibits the synthesis of mycolic acid, required for the mycobacterial cell wall. A range of radicals are produced by KatG activation of isoniazid, including nitric oxide, which has also been shown to be important in the action of another antimycobacterial prodrug PA-824 [2, 3]. Isoniazid is bactericidal to rapidly dividing mycobacteria, but is bacteriostatic if the mycobacteria are slow-growing [4].



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