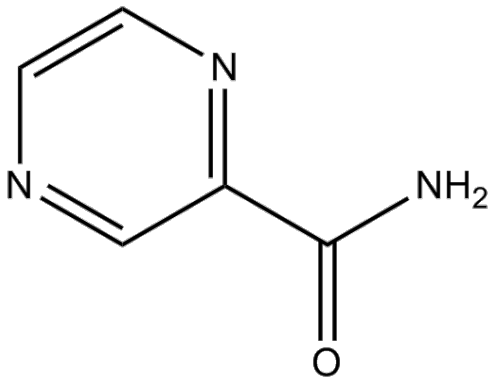
Product Data Sheet

Product Name: Pyrazinamide
Cat. No.: GC13843

Chemical Properties

Cas. No.	98-96-4		
Chemical Name	pyrazine-2-carboxamide		
SMILES	C1=CN=C(C=N1)C(=O)N		
Formula	C5H5N3O	M.Wt	123.11
Solubility	≥ 5.35mg/mL 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

Pyrazinamide is a pyrazine that is used therapeutically as an antitubercular agent.Target: AntibacterialPyrazinamide is a prodrug that stops the growth of Mycobacterium tuberculosis. Pyrazinoic acid was thought to inhibit the enzyme fatty acid synthase (FAS) I, which is required by the bacterium to synthesise fatty acids although this has been discounted. It was also suggested that the accumulation of pyrazinoic acid disrupts membrane potential and interferes with energy production, necessary for survival of M. tuberculosis at an acidic site of infection. Pyrazinoic acid

binds to the ribosomal protein S1 (RpsA) and inhibits trans-translation. This may explain the ability of the drug to kill dormant mycobacteria [1-4].

References:

[1]. Zhang, Y. and D. Mitchison, The curious characteristics of pyrazinamide: a review. Int J Tuberc Lung Dis, 2003. 7(1): p. 6-21.
[2]. Zimhony, O., et al., Pyrazinamide inhibits the eukaryotic-like fatty acid synthetase I (FASI) of Mycobacterium tuberculosis. Nat Med, 2000. 6(9): p. 1043-7.
[3]. Boshoff, H.I., V. Mizrahi, and C.E. Barry, 3rd, Effects of pyrazinamide on fatty acid synthesis by whole mycobacterial cells and purified fatty acid synthase I. J Bacteriol, 2002. 184(8): p. 2167-72.
[4]. Shi, W., et al., Pyrazinamide inhibits trans-translation in Mycobacterium tuberculosis. Science, 2011. 333(6049): p. 1630-2.

Caution: Product has not been fully validated for medical applications. For research use only.
Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA