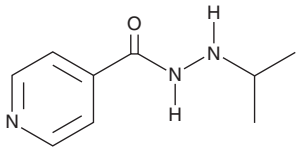
PRODUCT INFORMATION

Iproniazid

Item No. 45450

CAS Registry No.: 54-92-2
Formal Name: 2-(1-methylethyl)hydrazide, 4-pyridinecarboxylic acid
MF: $C_9H_{13}N_3O$
FW: 179.2
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Iproniazid is supplied as a solid. A stock solution may be made by dissolving the iproniazid in the solvent of choice, which should be purged with an inert gas. Iproniazid is soluble (≥10 mg/ml) in organic solvents such as ethanol and DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of iproniazid can be prepared by directly dissolving the solid in aqueous buffers. Iproniazid is soluble (≥10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Iproniazid is an inhibitor of monoamine oxidase A (MAO-A) and MAO-B (IC_{50}s = 6.56 and 7.54 µM, respectively).[1] It reduces immobility in an open swimming test in rats, indicating antidepressant-like activity, when administered at a dose of 10 mg/kg.[2] Iproniazid (300 and 400 mg/kg) induces acute hepatic necrosis in rats.[3] Formulations containing iproniazid were previously used in the treatment of depression.

References

1. Matos, M.J., Viña, D., Picciau, C., *et al.* Synthesis and evaluation of 6-methyl-3-phenylcoumarins as potent and selective MAO-B inhibitors. *Bioorg. Med. Chem. Lett.* **19(17)**, 5053-5055 (2009).
2. Sun, M.-K. and Alkon, D.L. Open space swimming test to index antidepressant activity. *J. Neurosci. Methods* **126(1),** 35-40 (2003).
3. Timbrell, J.A. The role of metabolism in the hepatotoxicity of isoniazid and iproniazid. *Drug Metab. Rev.* **10(1)**, 125-147 (1979).

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