

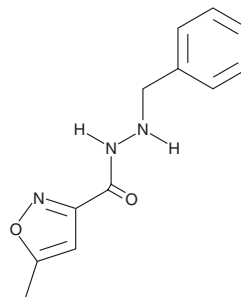
PRODUCT INFORMATION



Isocarboxazid

Item No. 23625

CAS Registry No.: 59-63-2
Formal Name: 5-methyl-3-isoxazolecarboxylic acid, 2-(phenylmethyl)hydrazide
Synonyms: NSC 169893, Ro 5-0831
MF: C₁₂H₁₃N₃O₂
FW: 231.3
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

Isocarboxazid is supplied as a solid. A stock solution may be made by dissolving the isocarboxazid in the solvent of choice. Isocarboxazid is slightly soluble in acetonitrile and chloroform.

Description

Isocarboxazid is an inhibitor of monoamine oxidase (MAO; IC₅₀ = 4.8 μM for rat brain MAO).¹ It induces a 4-fold increase in tryptamine action in isolated rat fundal strips at a concentration of 50 nM. *In vivo*, isocarboxazid potentiates tryptamine toxicity (LD₅₀ = 8 mg/kg following subcutaneous administration of 250 mg/kg tryptamine). It inhibits 90% of MAO activity in isolated rat hearts and reduces cardiomegaly induced by isoproterenol (Item No. 15592) in rats at a dose of 20 mg/kg.² Oral administration of isocarboxazid (10 mg/kg) increases levels of dopamine and norepinephrine and reduces levels of the monoamine metabolites DOPAC, homovanillic acid (HVA; Item No. 20877), and 5-hydroxy indole-3-acetic acid (5-HIAA; Item No. 22889) by 43, 32, and 28%, respectively, in mouse brain.³ Formulations containing isocarboxazid have been used for the treatment of minor depression.⁴

References

1. Maxwell, D.R., Gray, W.R., and Taylor, E.M. Relative activity of some inhibitors of mono-amine oxidase in potentiating the action of tryptamine in vitro and in vivo. *Br. J. Pharmacol. Chemother.* **17(3)**, 310-320 (1961).
2. Stanton, H.C., Bowman, Z., and Cooper, C.M. Effects of monoamine oxidase inhibitors on isoproterenol-induced cardiomegaly in rats. *Toxicol. Appl. Pharmacol.* **16(1)**, 256-263 (1970).
3. Yokoyama, T., Kamioka, T., Iwata, N., *et al.* Effects of RS-2232, a potential antidepressant, on the levels of monoamines, precursor amino acids and their related metabolites in mouse brain. *Jpn. J. Pharmacol.* **44(4)**, 413-420 (1987).
4. Barbui, C., Cipriani, A., Patel, V., *et al.* Efficacy of antidepressants and benzodiazepines in minor depression: Systematic review and meta-analysis. *Br. J. Psychiatry* **198(1)**, 11-16 (2011).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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