

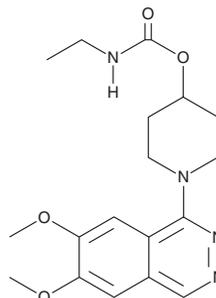
PRODUCT INFORMATION



Carbazeran

Item No. 26092

CAS Registry No.: 70724-25-3
Formal Name: N-ethyl-carbamic acid,
1-(6,7-dimethoxy-1-phthalazinyl)-
4-piperidinyl ester
MF: C₁₈H₂₄N₄O₄
FW: 360.4
Purity: ≥95%
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

Carbazeran is supplied as a solid. A stock solution may be made by dissolving the carbazeran in the solvent of choice, which should be purged with an inert gas. Carbazeran is slightly soluble in chloroform and methanol.

Description

Carbazeran is an inhibitor of phosphodiesterase 2 (PDE2) and PDE3.¹ It inhibits cAMP hydrolysis (IC₅₀ = 4.1 μM in rabbit heart ventricles) selectively over cGMP hydrolysis (IC₅₀ = 171 μM).² It induces positive inotropic (EC₅₀ = 100 μM) and negative chronotropic effects in isolated rabbit papillary muscle and right atria, respectively. Carbazeran is also a substrate for the enzyme aldehyde oxidase (AOX1), which is involved in the metabolism of xenobiotics.^{3,4}

References

1. Price, B., Pyne, N.J., and Houslay, M.D. Proteolysis of cyclic AMP phosphodiesterase-II attenuates its ability to be inhibited by compounds which exert positive inotropic actions in cardiac tissue. *Biochem. Pharmacol.* **36(23)**, 4047-4054 (1987).
2. Shahid, M. and Rodger, I.W. Chronotropic and inotropic actions of amrinone, carbazeran and isobutylmethyl xanthine: Role of phosphodiesterase inhibition. *Br. J. Pharmacol.* **98(1)**, 291-301 (1989).
3. Hutzler, J.M., Yang, Y.S., Albaugh, D., et al. Characterization of aldehyde oxidase enzyme activity in cryopreserved human hepatocytes. *Drug Metab. Dispos.* **40(2)**, 267-275 (2012).
4. Wilkinson, D.J., Southall, R.L., Li, M., et al. Minipig and human metabolism of aldehyde oxidase substrates: *In Vitro-in Vivo* comparisons. *AAPS J.* **19(4)**, 1163-1174 (2017).

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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