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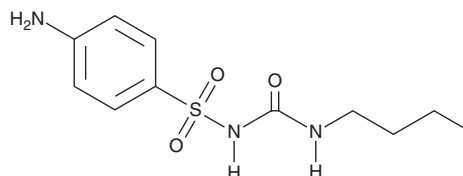
PRODUCT INFORMATION



Carbutamide

Item No. 35552

CAS Registry No.: 339-43-5
Formal Name: 4-amino-N-[(butylamino) carbonyl]-benzenesulfonamide
Synonyms: BZ-55, NSC 242409, NSC 246862, U-6987
MF: C₁₁H₁₇N₃O₃S
FW: 271.3
Purity: ≥98%
UV/Vis.: λ_{max}: 271 nm
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

Carbutamide is supplied as a solid. A stock solution may be made by dissolving the carbutamide in the solvent of choice, which should be purged with an inert gas. Carbutamide is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of carbutamide in these solvents is approximately 12 and 11 mg/ml, respectively. Carbutamide is slightly soluble in ethanol.

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 carbutamide can be prepared by directly dissolving the solid in aqueous buffers. The solubility of carbutamide in PBS (pH 7.2) is approximately 0.3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Carbutamide is a first generation sulfonylurea.¹ It inhibits ATP-sensitive potassium (K_{ATP}) channels in β-cells with an IC₅₀ value of 173 μM.² It reduces blood glucose levels in anesthetized dogs when administered at a dose of 50 mg/kg.³ Carbutamide also increases ventricular fibrillation in a rat model of cardiac ischemia induced by left anterior descending (LAD) coronary artery ligation.¹ Formulations containing carbutamide have previously been used in the treatment of diabetes.

References

1. Ballagi-Pordány, G., Köszeghy, A., Koltai, M.Z., *et al.* Divergent cardiac effects of the first and second generation hypoglycemic sulfonylurea compounds. *Diabetes Res. Clin. Pract.* **8(2)**, 109-114 (1990).
2. Schwanstecher, C., Meyer, M., Schwanstecher, M., *et al.* Interaction of N-benzoyl-D-phenylalanine and related compounds with the sulphonylurea receptor of β-cells. *Br. J. Pharmacol.* **123(6)**, 1023-1030 (1998).
3. Pozza, G., Galansino, G., and Foà, P.P. Insulin secretion following carbutamide injections in normal dogs. *Proc. Soc. Exp. Biol. Med.* **93(3)**, 539-542 (1956).

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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