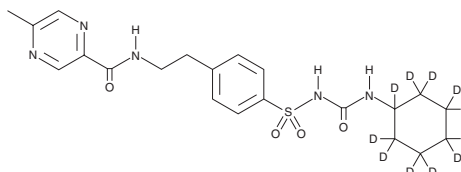


PRODUCT INFORMATION



Glipizide-d₁₁ Item No. 30074

CAS Registry No.: 1189426-07-0
Formal Name: N-[2-[4-[[[(cyclohexyl-1,2,2,3,3,4,4,5,5,6,6-d₁₁-amino)carbonyl]amino]sulfonyl]phenyl]ethyl]-5-methyl-2-pyrazinecarboxamide
Synonyms: CP 28720, K 4024, TK 1320
MF: C₂₁H₁₆D₁₁N₅O₄S
FW: 456.6
Chemical Purity: ≥98% (Glipizide)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₁₁); ≤1% d₀
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

Glipizide-d₁₁ is intended for use as an internal standard for the quantification of glipizide (Item No. 11579) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Glipizide-d₁₁ is supplied as a solid. A stock solution may be made by dissolving the glipizide-d₁₁ in the solvent of choice, which should be purged with an inert gas. Glipizide-d₁₁ is slightly soluble in organic solvents such as DMSO and ethyl acetate.

Description

Glipizide is a hypoglycemic agent.¹ It inhibits ATP-sensitive potassium (K_{ATP}) channels in primary mouse pancreatic β cells (IC₅₀ = 6.4 nM). Glipizide induces insulin release from isolated rat pancreatic tissue with an EC₅₀ value of 40 nM.² Dietary administration of glipizide (5 mg/kg per day for 10 days) increases the number of insulin receptors on isolated and purified mouse liver plasma membranes.³ It reduces plasma glucose and triglyceride, but not total cholesterol, levels and increases plasma insulin levels in a rat model of diabetes induced by a high-fat diet and streptozotocin (STZ; Item No. 13104) when administered orally at a dose of 5 mg/kg.⁴ Formulations containing glipizide have been used in the treatment of type 2 diabetes.

References

1. Züñkler, B.J., Lenzen, S., Männer, K., *et al.* Concentration-dependent effects of tolbutamide, meglitinide, glipizide, glibenclamide and diazoxide on ATP-regulated K⁺ currents in pancreatic B-cells. *Naunyn-Schmiedeberg's Arch. Pharmacol.* **337**(2), 225-230 (1998).
2. Yao, S.Y.M., Ng, A.M.L., Muzyka, W.R., *et al.* Molecular cloning and functional characterization of nitrobenzylthioinosine (NBMPR)-sensitive (es) and NBMPR-insensitive (ei) equilibrative nucleoside transporter proteins (rENT1 and rENT2) from rat tissues. *J. Biol. Chem.* **272**(45), 28423-28430 (1997).
3. Feinglos, M.N. and Lebovitz, H.E. Sulphonylureas increase the number of insulin receptors. *Nature* **276**(5684), 184-185 (1978).
4. Srinivasan, K., Viswanad, B., Asrat, L., *et al.* Combination of high-fat diet-fed and low-dose streptozotocin-treated rat: A model for type 2 diabetes and pharmacological screening. *Pharmacol. Res.* **52**(4), 313-320 (2005).

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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