

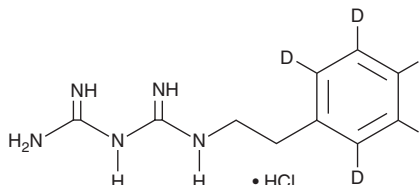
PRODUCT INFORMATION



Phenformin-d₅ (hydrochloride)

Item No. 36341

Formal Name: N-[2-(phenyl-2,3,4,5,6-d₅)ethyl]-imidodicarbonimidic diamide, monohydrochloride
MF: C₁₀H₁₀D₅N₅ • HCl
FW: 246.8
Chemical Purity: ≥98% (Phenformin)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₅); ≤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

Phenformin-d₅ (hydrochloride) is intended for use as an internal standard for the quantification of phenformin 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).

Phenformin-d₅ (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the phenformin-d₅ (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Phenformin-d₅ (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of phenformin-d₅ (hydrochloride) in ethanol is approximately 10 mg/ml and approximately 33 mg/ml in DMSO and DMF.

Description

Phenformin is an antihyperglycemic biguanide.¹ It reduces blood glucose levels in a mouse model of diabetes induced by alloxan (Item No. 9002196) when administered at a dose of 100 mg/kg. Phenformin (250 mg/kg) induces lactic acidosis in diabetic dogs.² It also inhibits tumor growth of MCF-7 and MDA-MB-231 breast cancer mouse xenograft models when administered at a dose of 300 mg/kg.³ Formulations containing phenformin were previously used in the treatment of diabetes mellitus.

References

1. Li, W.-L., Wu, J.-L., Ren, B.-R., *et al.* Pharmacological studies on anti-hyperglycemic effect of folium eriobotryae. *Am. J. Chin. Med.* **35**(4), 705-711 (2007).
2. Arieff, A.I., Park, R., Leach, W.J., *et al.* Pathophysiology of experimental lactic acidosis in dogs. *Am. J. Physiol.* **239**(2), F135-F142 (1980).
3. Appleyard, M.V.C.L., Murray, K.E., Coates, P.J., *et al.* Phenformin as prophylaxis and therapy in breast cancer xenografts. *Br. J. Cancer* **106**(6), 1117-1122 (2012).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 • USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM