Metformin (hydrochloride)

Item No. 13118

CAS Registry No.: 1115-70-4
Formal Name: N,N-dimethyl-imidodicarbonimidic diamide, monohydrochloride
Synonyms: Apophage, Diaformin, Fornidd, Glucoformin, Glucophage, LA 6023, Melbin, Orabet, Riomet, Walaphage

MF: C₄H₁₁N₅ • HCl
FW: 165.6
Purity: ≥98%
Stability: ≥2 years at -20°C

UV/Vis: λₘₐₓ: 237 nm

Laboratory Procedures
For long term storage, we suggest that metformin (hydrochloride) be stored as supplied at -20°C. It should be stable for at least two years.

Metformin (hydrochloride) is supplied as a crystalline solid. 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 metformin (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of metformin (hydrochloride) in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Metformin is an orally administered biguanide derivative used to lower blood glucose concentrations in patients with non-insulin-dependent diabetes mellitus. It improves insulin sensitivity and decreases insulin resistance by inhibiting complex 1 of the mitochondrial respiratory chain and inducing AMP-activated protein kinase-dependent signaling.2,3 Metformin has also been shown to improve fatty liver disease by reversing hepatic steatosis in ob/ob mice.2 Metformin is an orally administered biguanide derivative used to lower blood glucose concentrations in patients with non-insulin-dependent diabetes mellitus.1 It improves insulin sensitivity and decreases insulin resistance by inhibiting complex 1 of the mitochondrial respiratory chain and inducing AMP-activated protein kinase-dependent signaling.2,3

References

Related Products
For a list of related products please visit: www.caymanchem.com/catalog/13118

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. 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 Company makes no warranty or guarantee of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals heretofore Cayman warrants only to the original customer that the material will meet our specifications in the time of delivery.

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