

Metformin hydrochloride

Catalogue Number : 1117045

RUO: For Research Use Only. Not for use in diagnostic procedures.

Product Information

Synonyms: Dimethylbiguanidine, Dimethylguanylguanidine, Glucophage, Metformin

Chemical Name: 3-(diaminomethylidene)-1,1-dimethylguanidine;hydrochloride

Molecular Formula: C₄H₁₁N₅ HCl

Molecular Weight: 165.6

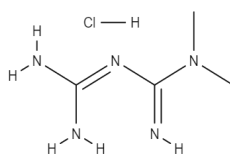
CAS Number: 1115-70-4

Purity: ≥98%

Applications: FA

Formulation: Crystalline solid

Storage: Product should be kept at -20°C.



Description

Metformin is an activator of the AMPK pathway and is reported to decrease hyperglycemia by the suppression of liver glucose production. Metformin improves insulin sensitivity and lower plasma glucose levels. It is reported to promote neurogenesis and exhibits an anti-proliferative effect in cancer lines.

Preparation & Storage

Soluble in organic solvents such as DMSO. DMSO up to 50mM.

References

1. Evans, J. M., Donnelly, L. A., Emslie-Smith, A. M., Alessi, D. R., Morris, A. D. (2005). Metformin and reduced risk of cancer in diabetic patients. *Bmj*, 330(7503), 1304-1305.
2. Hirsch, H. A., Iliopoulos, D., Struhl, K. (2013). Metformin inhibits the inflammatory response associated with cellular transformation and cancer stem cell growth. *Proceedings of the National Academy of Sciences*, 110(3), 972-977.
3. Violette, B., Guigas, B., Garcia, N. S., Leclerc, J., Foretz, M., Andreelli, F. (2012). Cellular and molecular mechanisms of metformin: an overview. *Clinical science*, 122(6), 253-270.