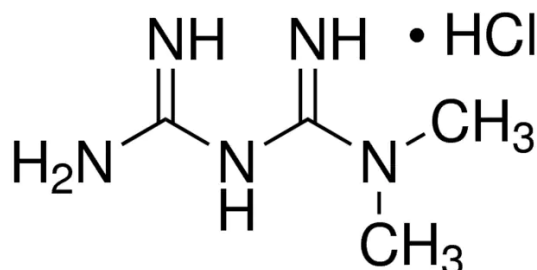


## Metformin hydrochloride

Cat # NB-48-0604



### Product Information

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<b>Batch No.:</b>	0401BG/01
<b>Chemical Name:</b>	1,1-Dimethyl-biguanide hydrochloride
<b>Batch Molecular Formula:</b>	C <sub>4</sub> H <sub>11</sub> N <sub>5</sub> .HCl
<b>Batch Molecular Weight:</b>	165.62
<b>CAS No.:</b>	[1115-70-4]
<b>Physical Appearance:</b>	White crystalline powder
<b>Storage:</b>	RT

### Solvent and solubility

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Soluble in water

### Biological activity

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A Biguanide hypoglycemic agent used in the treatment of non-insulin-dependent diabetes mellitus not responding to dietary modification. It improves glycemic control by improving insulin sensitivity and decreasing intestinal absorption of glucose. Recently it was shown that it is a potent inhibitor of cell proliferation in endometrial cancer cell lines. This effect is partially mediated through AMPK activation and subsequent inhibition of the mTOR pathway. It acts on  $\tau$  phosphorylation via mTOR/protein phosphatase 2A (PP2A) signaling, suggesting a potential beneficial role of Metformin in the prophylaxis and / or therapy of AD.

### References

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1. Hess and Sullivan (2004) Ann Pharmacother 38:1283
2. Cantrell et al. (2010) Gynecol Oncol 116:92
3. Brown et al. (2010) Breast Cancer Res Treat 123:591
4. Kickstein et al. (2010) Proc Natl Acad Sci USA 107:21830
5. Kato et al. (2012) Mol Cancer Ther 11:549

- CAUTION - Not fully tested. For Research use only. Not for human use. -

NB-48-0604 Metformin hydrochloride

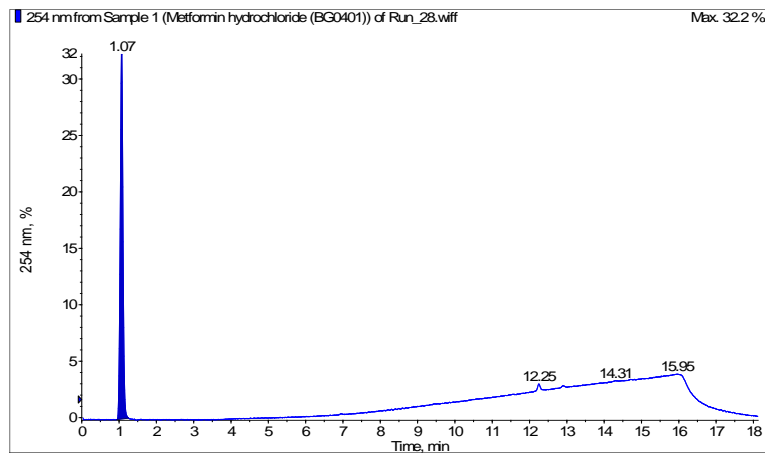
## Analytical data

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HPLC: corresponds to the reference

MS: corresponds to the reference

Tests: Loss on drying: 0.06% (complies)  
Residue on ignition: < 0.1% (complies)  
Heavy Metals: < 10 ppm (complies)  
HPLC Assay: 99.0% (complies).  
Conforms to USP28.



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