Product Name: Metformin hydrochloride
Catalog No.: 2864
Batch No.: 2
CAS Number: 1115-70-4
EC Number: 214-230-6
IUPAC Name: \(N,N\)-Dimethylimidodicarbonimidic diamide hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

   Batch Molecular Formula: \(C_4H_{11}N_5\cdot HCl\)
   Batch Molecular Weight: 165.62
   Physical Appearance: White solid
   Solubility: water to 100 mM
              DMSO to 20 mM with gentle warming
   Storage: Store at RT
   Batch Molecular Structure:

2. ANALYTICAL DATA

   Melting Point: Between 224 - 225°C
   \(^1\)H NMR: Consistent with structure
   Mass Spectrum: Consistent with structure
   Microanalysis:

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<th>Carbon</th>
<th>Hydrogen</th>
<th>Nitrogen</th>
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Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956
Product Name: Metformin hydrochloride

Catalog No.: 2864

Batch No.: 2

CAS Number: 1115-70-4

IUPAC Name: N,N-Dimethylimidodicarbonimidic diamide hydrochloride

Description:
Metformin hydrochloride is an antidiabetic agent; lowers plasma glucose levels and improves insulin sensitivity. Inhibits hepatic gluconeogenesis via activation of the LKB1/AMPK pathway. Displays antiproliferative effects in cancer cell lines via inhibition of mitochondrial complex I (MRC-1). Activates the aPKC-CBP pathway in neural precursors to promote neurogenesis. Activates autophagy. Identified by chemoinformatics as targeting human host proteins that interact with SARS-CoV-2.

Physical and Chemical Properties:
Batch Molecular Formula: C$_6$H$_{11}$N$_5$.HCl
Batch Molecular Weight: 165.62
Physical Appearance: White solid

Storage: Store at RT

Solubility & Usage Info:
water to 100 mM
DMSO to 20 mM with gentle warming

Stability and Solubility Advice:
Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:
