

# Gliclazide

Catalog No: tcsc2963



## Available Sizes

Size: 1g

Size: 5g



## Specifications

**CAS No:**

21187-98-4

**Formula:**

$C_{15}H_{21}N_3O_3S$

**Pathway:**

Membrane Transporter/Ion Channel

**Target:**

Potassium Channel

**Purity / Grade:**

>98%

**Solubility:**

DMSO :  $\geq 100$  mg/mL (309.21 mM); H<sub>2</sub>O :

**Alternative Names:**

S1702;SE1702

**Observed Molecular Weight:**

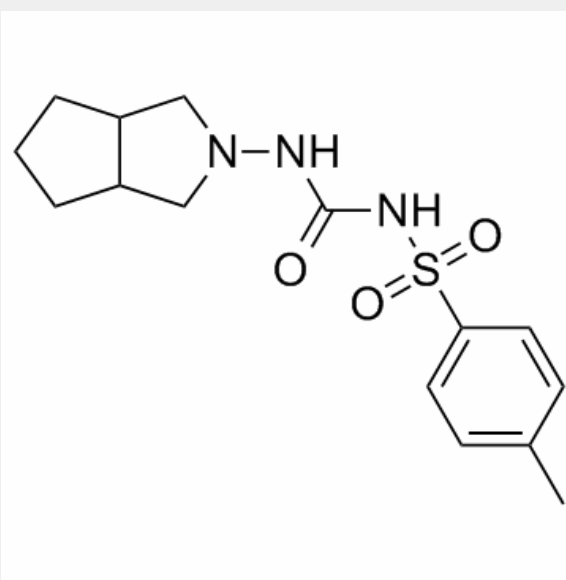
323.41

## Product Description

Gliclazide is a whole-cell beta-cell ATP-sensitive potassium currents blocker with an IC<sub>50</sub> of 184 nM.

Target: Potassium Channel

gliclazide further characterize its mechanism of hypoglycemic effect: the observed improvements in insulin sensitivity and in GLUT4 translocation indicate that gliclazide counters the hydrogen peroxide-induced insulin resistance in 3T3L1 adipocytes and also would further augment the hypoglycemic effect of this drug as insulinotropic sulfonylurea [1]. Gliclazide blocked whole-cell beta-cell KATP currents with an IC<sub>50</sub> of 184 +/- 30 nmol/l (n = 6-10) but was much less effective in cardiac and smooth muscle (IC<sub>50</sub>s of 19.5 +/- 5.4 micromol/l (n = 6-12) and 37.9 +/- 1.0 micromol/l (n = 5-10), respectively). In all three tissues, the action of the drug on whole-cell KATP currents was rapidly reversible. In inside-out patches on beta-cells, gliclazide (1 micromol/l) produced a maximum of 66 +/- 13 % inhibition (n = 5), compared with more than 98 % block in the whole-cell configuration. Gliclazide is a high-potency sulphonylurea which shows specificity for the pancreatic beta-cell KATP channel over heart and smooth muscle. In this respect, it differs from glibenclamide [2].



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!