Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

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 : ≥ 100 mg/mL (309.21 mM); H2O :

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 IC50 of 184 nM.

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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 IC50 of 184 +/- 30 nmol/l (n = 6-10) but was much less effective in cardiac and smooth muscle (IC50s 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].