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Tolbutamide

Catalog No: tcsc2500

Available Sizes

Size: 1g

Size: 5g

Specifications

CAS No:
64-77-7

Formula:
$C_{12}H_{18}N_2O_3S$

Pathway:
Autophagy;Membrane Transporter/Ion Channel

Target:
Autophagy;Potassium Channel

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 34 mg/mL (125.76 mM)

Observed Molecular Weight:
270.35

Product Description

Tolbutamide is a first generation potassium channel blocker, sulfonylurea oral hypoglycemic drug.

Target: Potassium Channel

Tolbutamide is an oral antihyperglycemic agent used for the treatment of non-insulin-dependent diabetes mellitus (NIDDM). Tolbutamide act by stimulating β cells of the pancreas to release insulin. Sulfonylureas increase both basal insulin secretion and

meal-stimulated insulin release. Tolbutamide belongs to a class of medications called sulfonylureas. Tolbutamide inhibits both the basal and the cyclic AMP-stimulated protein kinase activities and the IC50 of Tolbutamide is 4 mM. Similar Tolbutamide concentrations are required for half maximal inhibition of in vitro lipolysis induced by hormones (norepinephrine and ACTH) or by dibutyryl cyclic AMP plus theophylline. Tolbutamide also inhibits both soluble and membrane-bound protein kinase from canine heart. The Tolbutamide inhibition of adipose tissue cyclic AMP-dependent protein kinase is one possible explanation for the antilipolytic effects of this drug [1]. Tolbutamide inhibits C6-glioma cell proliferation by increasing Cx43, which correlates with a reduction in pRb phosphorylation due to the up-regulation of the Cdk inhibitors p21 and p27 [2].