

Certificate of Analysis

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Product Name: Glibenclamide

Catalog No.: 0911

Batch No.: 4

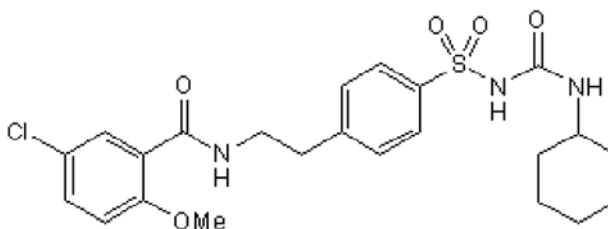
CAS Number: 10238-21-8

EC Number: 233-570-6

IUPAC Name: 5-Chloro-N-[2-[4-[[[(Cyclohexylamino)carbonyl]amino]sulphonyl]phenyl]ethyl]-2-methoxybenzamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₃H₂₈ClN₃O₅S
Batch Molecular Weight: 494
Physical Appearance: White solid
Solubility: DMSO to 100 mM
ethanol to 5 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.4% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	55.92	5.71	8.51
Found	55.92	5.79	8.5

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

ATP-dependent K⁺ channel (K_{ir}6, K_{ATP}) and CFTR Cl⁻ channel blocker. Inhibits K_{ir}6 currents in the pancreas, causing an increase in intracellular Ca²⁺ and insulin secretion. Inhibits recombinant CFTR Cl⁻ channels with an IC₅₀ of 20 μM.

Physical and Chemical Properties:

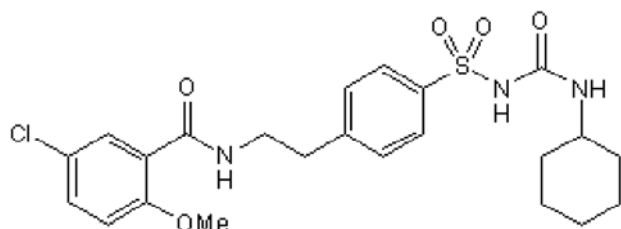
Batch Molecular Formula: C₂₃H₂₈ClN₃O₅S

Batch Molecular Weight: 494

Physical Appearance: White solid

Minimum Purity: ≥99%

Batch Molecular Structure:



References:

Sheppard and Welsh (1992) Effect of ATP-sensitive K⁺ channel regulators on cystic fibrosis transmembrane conductance regulator chloride channels. *J.Gen.Physiol.* **100** 573. PMID: 1281220.

Robertson et al (1990) Potassium channel modulators: scientific applications and therapeutic promise. *J.Med.Chem.* **33** 1529. PMID: 2187993.

Brogden et al (1979) Glibenclamide: a review. *Drugs* **18** 329. PMID: 389600.

Storage: Store at RT

Solubility & Usage Info:

DMSO to 100 mM

ethanol to 5 mM

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.

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