Glimepiride
Item No. 12090

CAS Registry No.: 93479-97-1
Formal Name: 3-ethyl-2,5-dihydro-4-methyl-N-[2-[4-[(trans-4-methylcyclohexyl)amino]carbonyl]amino]sulfonil[phenyl]ethyl]-2-oxo-1H-pyrole-1-carboxamide
Synonyms: Amaryl, Glista OD
MF: C24H34N4O5S
FW: 490.6
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis: λmax: 228 nm

Laboratory Procedures
For long term storage, we suggest that glimepiride be stored as supplied at -20°C. It should be stable for at least two years.

Glimepiride is supplied as a crystalline solid. A stock solution may be made by dissolving the glimepiride in the solvent of choice. Glimepiride is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of glimepiride in these solvents is approximately 3 and 10 mg/ml, respectively.

Glimepiride is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, glimepiride should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Glimepiride has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Glimepiride is a long-acting sulfonylurea that inhibits ATP-sensitive potassium (KATP) channels in pancreatic β-cells (IC50 = 3 nM), which leads to the release of insulin.1 At 20 μM, glimepiride has been shown to increase the activity of intracellular insulin receptors and to prevent insulin receptor downregulation during chronic insulin stimulation through a mechanism involving protein kinase C activation.2 It has been reported to be less effective at inhibiting nonpancreatic KATP channels, and therefore contributes fewer cardiac actions, compared to earlier generations of sulfonylurea anti-type 2 diabetes treatments.3

References

Related Products
For a list of related products please visit: www.caymanchem.com/catalog/12090

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent to you in your institution.

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