



LKT Laboratories, Inc.

## Gliclazide

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### Product Information

**Product ID** G4532

**CAS No.** 21187-98-4

**Chemical Name** N-[[[Hexahydrocyclopenta[c]pyrrol-2(1H)-yl]amino]- carbonyl]-4-methylbenzenesulfonamide

**Synonym** Diamicon, Glimicron, Nordialex

**Formula** C<sub>15</sub>H<sub>21</sub>N<sub>3</sub>O<sub>3</sub>S

**Formula Wt.** 323.41

**Melting Point** 180-182 °C

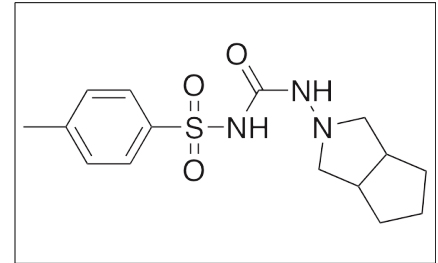
**Purity** ≥98%

**Solubility** Insoluble in water. Soluble in dichloromethane, chloroform, methanol, DMSO.

**Store Temp** Ambient

**Ship Temp** Ambient

**Description** Gliclazide is a sulfonylurea compound that inhibits sulfonylurea 1 (SUR1) receptors, exhibiting anti-diabetic and antioxidative activities. Inhibition of these receptors closes K<sup>+</sup> ion channels, inducing cell membrane depolarization, altering Ca<sup>2+</sup> homeostasis, and stimulating insulin release. In vitro, gliclazide inhibits H<sub>2</sub>O<sub>2</sub>-induced mitochondrial damage and apoptosis, decreasing oxidative stress.



**Bulk quantities available upon request**

Product ID	Size
G4532	1 g
G4532	5 g
G4532	10 g

**References** Proks P, de Wet H, Ashcroft FM. Molecular mechanism of sulphonylurea block of K(ATP) channels carrying mutations that impair ATP inhibition and cause neonatal diabetes. *Diabetes*. 2013 Nov;62(11):3909-19. PMID: 23835339.

Sliwinska A, Rogalska A, Szwed M, et al. Gliclazide may have an antiapoptotic effect related to its antioxidant properties in human normal and cancer cells. *Mol Biol Rep*. 2012 May;39(5):5253-67. PMID: 22183301.

Lawrence CL, Proks P, Rodrigo GC, et al. Gliclazide produces high-affinity block of KATP channels in mouse isolated pancreatic beta cells but not rat heart or arterial smooth muscle cells. *Diabetologia*. 2001 Aug;44(8):1019-25. PMID: 11484080.

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.