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## Product Data Sheet

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Product Name: Midaglizole

Cat. No.: GC67691

### Chemical Properties

Cas. No. 66529-17-7

Formula  $C_{16}H_{17}N_3$

M.Wt 251.33

Solubility DMSO : 162.5 mg/mL (646.56 mM; Need ultrasonic) Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

### Background

Midaglizole ((±)-DG5128 free base, DG5128 free base) is a potent  **$\alpha_2$ -adrenoceptor** antagonist. Midaglizole is a hypoglycemic agent. Midaglizole increases blood pressure and reduces blood glucose levels in vivo<sup>[1][2][3]</sup>.

Midaglizole stimulates insulin release with the EC<sub>50</sub> values of 200 nM, 24  $\mu$ M for rat islets and MIN6  $\beta$ -cell line, respectively<sup>[3]</sup>.

Midaglizole (3, 30 mg/kg; i.v.) increases blood pressure in rats<sup>[1]</sup>.

Midaglizole (0.2, 1, 2 mg/kg; infusion) reduces blood glucose levels in dags<sup>[2]</sup>.

Animal Model: 290-450 g, Male Wistar rats<sup>[1]</sup>

Dosage: 3, 30 mg/kg

Administration: i.v.

Result: Increased the blood pressure by 27 and 64 mmHg at 3, 30 mg/kg, respectively.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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Animal Model: Dogs<sup>[2]</sup>

Dosage: 0.2, 1, 2 mg/kg

Administration: Superior pancreaticoduodenal artery infusion

Result: Reduced blood glucose levels by stimulating insulin release from the pancreatic islets.

[1]. Hirohashi M, et al. Intrinsic pressor activity of midaglizole, an alpha-2 adrenoceptor antagonist, in pithed rats. *Jpn J Pharmacol.* 1990 Aug;53(4):519-20.

[2]. Ohneda K, et al. Mechanism of insulin secretion by midaglizole. *Diabetes Res Clin Pract.* 1993 Feb;19(2):127-32.

[3]. Proks P, et al. Inhibition of recombinant K(ATP) channels by the antidiabetic agents midaglizole, LY397364 and LY389382. *Eur J Pharmacol.* 2002 Sep 27;452(1):11-9.

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