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**Product Data Sheet**

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Product Name: Nisoldipine-d7

Cat. No.: GC62196

**Chemical Properties**

Cas. No. 1189718-34-0

Formula C<sub>20</sub>H<sub>17</sub>D<sub>7</sub>N<sub>2</sub>O<sub>6</sub> M.Wt 395.46

Solubility 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**

Nisoldipine-d7 (BAY-k 5552-d7) is the deuterium labeled Nisoldipine. Nisoldipine(BAY-k 5552) is a calcium channel blocker belonging to the dihydropyridines class, specific for L-type Cav1.2 with IC<sub>50</sub> of 10 nM[1][2].

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1].

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.

[2]. Hamilton SF, Houle LM, Thadani U. Rapid-release and coat-core formulations of nisoldipine in treatment of hypertension, angina, and heart failure. *Heart Dis.* 1999 Nov-Dec;1(5):279-88.

[3]. Fodor JG. Nisoldipine CC: efficacy and tolerability in hypertension and ischemic heart disease. *Cardiovasc Drugs Ther.* 1997 Jan;10 Suppl 3:873-9.

[4]. D.J. Duncker, J.M. Hartog, P.G. Hugenholtz, et al. The effects of nisoldipine (Bay K 5552) on cardiovascular performance and regional blood flow in pentobarbital -

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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anaesthetized pigs with or without  $\beta$ -adrenoceptor blockade. British Journal of Pharmacology. 1986,88(1): 9-18

[5]. Jan W. De Jong, Tom Huizer, Jan G.P. Tijssen. Energy conservation by nisoldipine in ischaemic heart. British Journal of Pharmacology. 1984, 83(4): 943-949

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