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## Product Data Sheet

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Product Name: A 68930 hydrochloride

Cat. No.: GC15498

### Chemical Properties

Cas. No. 130465-39-3

Chemical Name (1R,3S)-1-(aminomethyl)-3-phenylisochroman-5,6-diol hydrochloride

SMILES OC(C1=C(C=C2)[C@H](CN)O[C@H](C3=CC=CC=C3)C1)=C2O.Cl

Formula  $C_{16}H_{17}NO_3 \cdot HCl$  M.Wt 307.78

Solubility <15.39mg/ml in Water 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

A 68930 hydrochloride is a potent and selective agonist of D1 dopamine receptor with EC50 values of 2.5 and 3920 nM for D1 and D2 receptors, respectively [1].

D1 dopamine receptor is a G-protein couple receptor for dopamine and stimulates adenylate cyclase and cyclic AMP-dependent protein kinases. D1 dopamine receptor plays an important role in behavioral responses and neuronal growth and development.

A 68930 hydrochloride is a potent and selective D1 dopamine receptor agonist. In rats, A 68930 (0.9-15.0 μM) induced hypothermia in a dose-dependent way. Also, A 68930 (0.9-15.0 μM) inhibited locomotor activity in a dose-dependent way [2]. In adult rat, A 68930 (0.0625-4.0 mg/kg) induced grooming, vacuous chewing and sniffing, which were inhibited by SCH 23390, a D1-like receptor antagonist [3]. In chronic unpredictable (CUS) stress rat models, A68930 (0.25 mg/kg) significantly normalized the reduction of the number of tyrosine hydroxylase (TH) immunoreactive neurons in the striatum, ventral tegmental area, medial forebrain bundle and substantia nigra and glucocorticoid

**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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receptor (GR) in the cortex, hippocampus and striatum. Also, A68930 normalized the antioxidant enzyme activities, increased glutathione (GSH) and inhibited lipid peroxidation [4].

### References:

- [1]. Keabian JW, Briggs C, Britton DR, et al. A68930: a potent and specific agonist for the D-1 dopamine receptor. *Am J Hypertens*, 1990, 3(6 Pt 2): 40S-42S.
- [2]. Salmi P. Independent roles of dopamine D1 and D2/3 receptors in rat thermoregulation. *Brain Res*, 1998, 781(1-2): 188-193.
- [3]. Deveney AM, Waddington JL. Psychopharmacological distinction between novel full-efficacy "D1-like" dopamine receptor agonists. *Pharmacol Biochem Behav*, 1997, 58(2): 551-558.
- [4]. Rasheed N, Ahmad A, Al-Sheeha M, et al. Neuroprotective and anti-stress effect of A68930 in acute and chronic unpredictable stress model in rats. *Neurosci Lett*, 2011, 504(2): 151-155.

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