

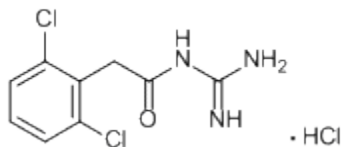
# Guanfacine hydrochloride

02/20

**ALTERNATE NAMES:** N-(diaminomethylidene)-2-(2,6-dichlorophenyl)acetamide, hydrochloride; N-Carbamimidoyl-2-(2,6-dichlorophenyl)acetamide hydrochloride; Tenex; N-Amidino-2-(2,6-dichlorophenyl)acetamide hydrochloride; N-(Aminoiminomethyl)-2,6-dichlorobenzeneacetamide hydrochloride; N-(diaminomethylidene)-2-(2,6-dichlorophenyl)acetamide hydrochloride

**CATALOG #:** B2990-5 5 mg  
B2990-25 25 mg

**STRUCTURE:**



**MOLECULAR FORMULA:** C<sub>9</sub>H<sub>10</sub>Cl<sub>2</sub>N<sub>3</sub>O

**MOLECULAR WEIGHT:** 282.55

**CAS NUMBER:** 29110-48-3

**APPEARANCE:** White powder

**PURITY:** >98.0%

**SOLUBILITY:** ~10 mg/ml in PBS, pH 7.2  
~20 mg/ml in DMSO and DMF  
~25 mg/ml in Ethanol

**DESCRIPTION:** Guanfacine is an  $\alpha_2$ -adrenergic receptor ( $\alpha_2$ -AR) agonist with anti-hypertensive activity. It shows  $K_i$  values of 93, 1,380, and 3,890 nM for  $\alpha_2A$ -,  $\alpha_2B$ -, and  $\alpha_2C$ -ARs, respectively, in a radioligand binding assay. Guanfacine (0.3-5 mg/kg) binds to adrenergic receptors in the central nervous system and lowers blood pressure in hypertensive rats in a dose-dependent manner. It also improves spatial working memory deficits induced by hypobaric hypoxia in rats. Guanfacine is used to treat high blood pressure and attention deficit hyperactivity disorder (ADHD).

**STORAGE TEMPERATURE:** -20°C

**HANDLING:** Do not take internally. Wear gloves and mask when handling the product! Avoid contact by all modes of exposure.

**REFERENCES:**

1. Kauser, H., Sahu, S., Kumar, S., et al. Guanfacine is an effective countermeasure for hypobaric hypoxia-induced cognitive decline. *Neuroscience* 254, 110-119 (2013).
2. Jasper, J.R., Lesnick, J.D., Chang, L.K., et al. Ligand efficacy and potency at recombinant  $\alpha_2$  adrenergic receptors: Agonist-mediated [<sup>35</sup>S]GTP $\gamma$ S binding. *Biochem. Pharmacol.* 55(7), 1035-1043 (1998).
3. Scholtysik, G. Pharmacology of guanfacine. *Br. J. Clin. Pharmacol.* 10(Suppl 1), 21S-24S (1980).

**RELATED PRODUCTS:**

Renin Inhibitor (Cat. No. 2084)  
Amlodipine besylate (Cat. No. 2378)  
Enalapril Maleate (Cat. No. B2131)  
L-755,507 (Cat. No. B1116)  
Clonidine hydrochloride (Cat. No. 2684)

**DISCLAIMER:** *FOR RESEARCH USE ONLY! Not to be used on humans.*