
Product Data Sheet

Product Name: Guanabenz (hydrochloride)

Cat. No.: GC13302

Chemical Properties

Cas. No. 23113-43-1

Chemical Name 2-[(2,6-dichlorophenyl)methylene]-hydrazinecarboximidamide, monohydrochloride

SMILES C1C=C(/C=N/NC(N)=N)C(Cl)=CC=C1.ClFormula $C_8H_8Cl_2N_4 \cdot HCl$ M.Wt 267.5Solubility $\geq 9.25\text{mg/mL}$ in DMSO 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**

Guanabenz is an orally active α_2 -adrenoceptor agonist with hypotensive effects [1]. The α_2 adrenergic receptors belong to a family of G protein-coupled receptor (GPCR), mediate many physiological actions of the endogenous catecholamines adrenaline and noradrenaline. The α_2 -adrenoceptor agonists have been currently used as antihypertensives and as veterinary sedative anaesthetics. They have also been used experimentally in humans as adjuncts to anaesthesia, as spinal analgesics, and to treat opioid, nicotine and alcohol dependence and withdrawal [2].

In vitro: Maximum concentrations of guanabenz in plasma (1.2 to 5.2 ng/ml) reached 2 to 5 hours after administration of capsules containing 16 or 32 mg of ^{14}C -labelled guanabenz. Guanabenz was 90% bound to human plasma proteins [1]. Guanabenz competed for imidazoline I₂-binding sites in brown adipose tissue with K_i of 97 nM [3].

Clinical trials: Guanabenz has undergone trials in patients with mild to moderate hypertension. The dosage was in the range of 8 to 64 mg daily, the majority of patients

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

Product Data Sheet

being controlled on up to 32 mg/day. Guanabenz was an effective antihypertensive agent in about 70% of patients in double-blind placebo-controlled trials. Guanabenz (16 to 64mg) produced a similar response rate. The most frequent side effects of guanabenz were drowsiness, dry mouth, dizziness and weakness, and such effects may lead to discontinuation of therapy in some patients [1].

References:

- [1] Holmes B, Brogden R N, Heel R C, et al. Guanabenz[J]. *Drugs*, 1983, 26(3): 212-229.
- [2] Aantaa R, Marjam ki A, Scheinin M. Molecular pharmacology of α 2-adrenoceptor subtypes[J]. *Annals of medicine*, 1995, 27(4): 439-449.
- [3] Rmer L, Wurster S, Savola J M, et al. Identification and characterization of the imidazoline I2b-binding sites in the hamster brown adipose tissue as a study model for imidazoline receptors[J]. *Archives of physiology and biochemistry*, 2003, 111(2): 159-166.

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