

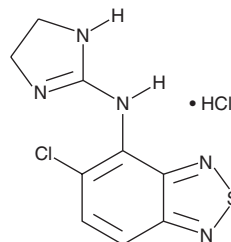
# PRODUCT INFORMATION



## Tizanidine (hydrochloride)

Item No. 16477

**CAS Registry No.:** 64461-82-1  
**Formal Name:** 5-chloro-N-(4,5-dihydro-1H-imidazol-2-yl)-2,1,3-benzothiadiazol-4-amine, monohydrochloride  
**Synonym:** DS 103-282  
**MF:** C<sub>9</sub>H<sub>8</sub>N<sub>5</sub>ClS • HCl  
**FW:** 290.2  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 228, 319 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Tizanidine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the tizanidine (hydrochloride) in the solvent of choice. Tizanidine (hydrochloride) is soluble in organic solvents such as ethanol and DMSO, which should be purged with an inert gas. The solubility of tizanidine (hydrochloride) in these solvents is approximately 0.2 mg/ml.

### Description

Tizanidine is an  $\alpha_2$ -adrenergic receptor ( $\alpha_2$ -AR) agonist.<sup>1</sup> Administration of tizanidine reduces neuronal excitation induced by noxious stimuli and depresses spontaneous neuronal firing in anesthetized cats. Tizanidine-induced neuronal depression is reversed by the selective  $\alpha_2$ -AR antagonist RX781094 but not the  $\alpha_1$ -AR antagonists prazosin (Item No. 15023) and WB-4101. It acts as a muscle relaxant that inhibits  $\alpha$ - and  $\gamma$ -rigidity in rats, reflex muscle tone in rabbits, and the linguomandibular reflex in cats without sedative, hemodynamic, or neurochemical effects.<sup>2</sup> Formulations containing tizanidine have been used in the treatment of spasticity. This product is also available as an analytical reference standard (Item No. 38559).

### References

1. Davies, J. and Quinlan, J.E. Selective inhibition of responses of feline dorsal horn neurons to noxious cutaneous stimuli by tizanidine (DS103-282) and noradrenaline: Involvement of  $\alpha_2$ -adrenoceptors. *Neuroscience* **16(3)**, 673-682 (1985).
2. Sayers, A.C., Bürki, H.R., and Eichenberger, E. The pharmacology of 5-chloro-4-(2-imidazolin-2-yl-amino)-2,1,3-benzothiadiazole (DS 103-282), a novel myotonolytic agent. *Arzneimittelforschung* **30(5)**, 793-803 (1980).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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