

**Product Name:** Tansospirone hydrochloride

**Catalog No.:** 2854

**Batch No.:** 5

CAS Number: 99095-10-0

IUPAC Name: (3a*R*,4*S*,7*R*,7a*S*)-*rel*-Hexahydro-2-[4-[4-(2-pyrimidinyl)-1-piperazinyl]butyl]-4,7-methano-1*H*-isoindole-1,3(2*H*)-dione hydrochloride

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>21</sub>H<sub>29</sub>N<sub>5</sub>O<sub>2</sub>.HCl.

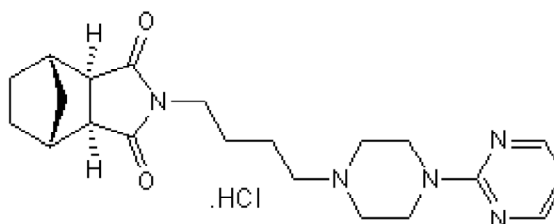
**Batch Molecular Weight:** 419.95

**Physical Appearance:** White solid

**Solubility:** DMSO to 100 mM  
water to 100 mM

**Storage:** Store at +4°C

**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 98.4% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen	Chlorine
Theoretical	60.06	7.2	16.68	8.44
Found	59.07	7.16	16.44	8.96

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**Description:**

Tansospirone hydrochloride is a 5-HT<sub>1A</sub> receptor partial agonist (K<sub>i</sub> = 27 nM) that displays selectivity over 5-HT<sub>2</sub>, 5-HT<sub>1C</sub>, α<sub>1</sub>, α<sub>2</sub>, D<sub>1</sub> and D<sub>2</sub> receptors (K<sub>i</sub> values ranging from 1300 - 41000 nM). Inactive at 5-HT uptake sites, 5-HT<sub>1B</sub>, β-adrenergic, muscarinic and benzodiazepine receptors. Displays anxiolytic activity.

**Physical and Chemical Properties:**

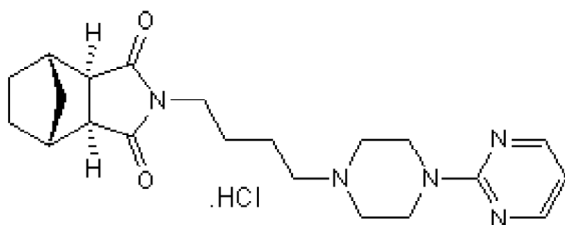
Batch Molecular Formula: C<sub>21</sub>H<sub>29</sub>N<sub>5</sub>O<sub>2</sub>.HCl.

Batch Molecular Weight: 419.95

Physical Appearance: White solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**References:**

**Matsubara *et al*** (2006) Tansospirone, a 5-HT<sub>1A</sub> agonist, ameliorates movement disorder via non-D<sub>1</sub> systems in rats with unilateral 6-hydroxyDA-generated lesions. *Brain Res.* **1112** 126. PMID: 16884702.

**Pollard *et al*** (1992) Effects of tansospirone in three behavioral tests for anxiolytics. *Eur.J.Pharmacol.* **221** 297. PMID: 1358655.

**Hamik *et al*** (1990) Analysis of tansospirone (SM-3997) interactions with neurotransmitter receptor binding sites. *Biol.Psychiatry* **28** 99. PMID: 1974152.

**Storage:** Store at +4°C

**Solubility & Usage Info:**

DMSO to 100 mM

water to 100 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. \*Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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