

Certificate of Analysis

Product Name: Tandospirone hydrochloride

Catalog No.: 2854

Batch No.: 4

CAS Number: 99095-10-0

IUPAC Name: (3a*R*,4*S*,7*R*,7a*S*)-*re*-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: C₂₁H₂₉N₅O₂·HCl·¾H₂O

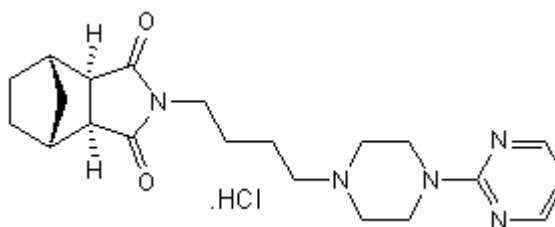
Batch Molecular Weight: 433.46

Physical Appearance: White solid

Solubility: DMSO to 100 mM
water to 100 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.37 (Dichloromethane:Methanol [95:5])

HPLC: Shows 99.3% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	58.19	7.32	16.16
Found	58.51	7.06	16.36

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

5-HT_{1A} receptor partial agonist (K_i = 27 nM) that displays selectivity over 5-HT₂, 5-HT_{1C}, α₁, α₂, D₁ and D₂ receptors (K_i values ranging from 1300 - 41000 nM). Inactive at 5-HT uptake sites, 5-HT_{1B}, β-adrenergic, muscarinic and benzodiazepine receptors. Displays anxiolytic activity.

Physical and Chemical Properties:

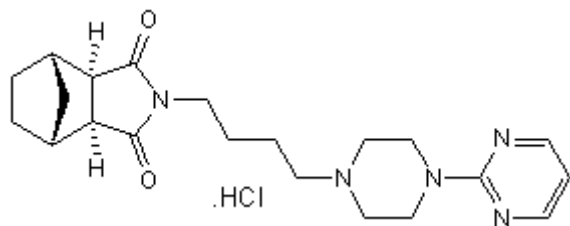
Batch Molecular Formula: C₂₁H₂₉N₅O₂.HCl.¾H₂O

Batch Molecular Weight: 433.46

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



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. Our standard recommendations are:

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.

References:

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

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

Matsubara et al (2006) Tansospirone, a 5-HT_{1A} agonist, ameliorates movement disorder via non-dopaminergic systems in rats with unilateral 6-hydroxydopamine-generated lesions. *Brain Res.* **1112** 126. PMID: 16884702.

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