

PRODUCT INFORMATION



Sonepiprazole

Item No. 11983

CAS Registry No.: 170858-33-0
Formal Name: 4-[4-[2-[(1S)-3,4-dihydro-1H-2-benzopyran-1-yl]ethyl]-1-piperazinyl]-benzenesulfonamide
Synonyms: PNU 101387, U-101387

MF: C₂₁H₂₇N₃O₃S

FW: 401.5

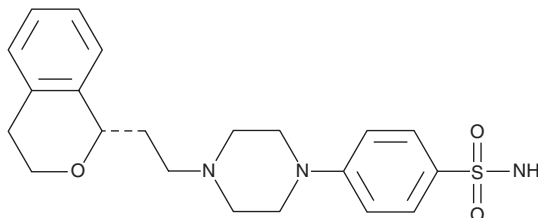
Purity: ≥98%

UV/Vis.: λ_{max}: 265 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

Sonepiprazole is supplied as a crystalline solid. A stock solution may be made by dissolving the sonepiprazole in the solvent of choice. Sonepiprazole is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of sonepiprazole in ethanol is approximately 200 µg/ml and approximately 30 mg/ml in DMSO and DMF.

Description

Sonepiprazole is a selective antagonist of the dopamine 4 (D₄) receptor (K_is = 10 nM). It is highly selective over D₁, D₂, and D₃ receptors, serotonin 1A and 2 receptors, as well as α₁- and α₂-adrenergic receptors (K_is > 2,000 nM).^{1,2} Its safety profile in rat studies is improved in comparison to classical antipsychotics but it is not effective for positive or negative symptoms of schizophrenia in patients.^{1,3} In a pharmacological model of stress exposure in rhesus monkeys, sonepiprazole reverses stress-induced cognitive deficits.⁴

References

1. Merchant, K.M., Gill, G.S., Harris, D.W., *et al.* Pharmacological characterization of U-101387, a dopamine D₄ receptor selective antagonist. *J. Pharmacol. Exp. Ther.* **279**(3), 1392-1403 (1996).
2. Tenbrink, R.E., Bergh, C.L., Duncanh, J.N., *et al.* (S)-(-)-4-[4-[2-(isochroman-1-yl)ethyl]-piperazin-1-yl] benzenesulfonamide, a selective dopamine D₄ antagonist. *J. Med. Chem.* **39**(13), 2435-2437 (1996).
3. Corrigan, M.H., Gallen, C.C., Bonura, M.L., *et al.* Effectiveness of the selective D₄ antagonist sonepiprazole in schizophrenia: A placebo-controlled trial. *Biol. Psychiatry* **55**(5), 445-451 (2004).
4. Arnsten, A.F.T., Murphy, B., and Merchant, K. The selective dopamine D₄ receptor antagonist, PNU-101387G, prevents stress-induced cognitive deficits in monkeys. *Neuropsychopharmacology* **23**(4), 405-410 (2000).

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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