

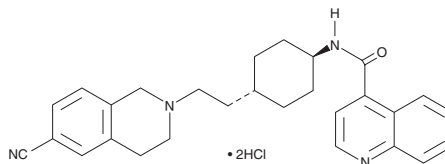
# PRODUCT INFORMATION



## SB 277011A (hydrochloride)

Item No. 11982

**CAS Registry No.:** 1226917-67-4  
**Formal Name:** N-[*trans*-4-[2-(6-cyano-3,4-dihydro-2(1H)-isoquinolinyl)ethyl]cyclohexyl]-4-quinolinecarboxamide, dihydrochloride  
**MF:** C<sub>28</sub>H<sub>30</sub>N<sub>4</sub>O • 2HCl  
**FW:** 511.5  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 230, 284 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

SB 277011A (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the SB 277011A (hydrochloride) in the solvent of choice, which should be purged with an inert gas. SB 277011A (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of SB 277011A (hydrochloride) in these solvents is approximately 0.1, 14, and 3 mg/ml, respectively.

SB 277011A (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SB 277011A (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. SB 277011A (hydrochloride) has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

SB 277011A is an antagonist of the dopamine D<sub>3</sub> receptor (pK<sub>i</sub> = 8.0) that is at least 100-fold selective for D<sub>3</sub> over other monoamine receptors (pK<sub>i</sub>s = 6.0, 5.0, and <5.2 for D<sub>2</sub>, 5-HT<sub>1D</sub> and 5-HT<sub>1B</sub> respectively).<sup>1-3</sup> It has high oral bioavailability and enters the central nervous system of the rat.<sup>1</sup> SB 277011A has been shown to have potential benefits in animal models of schizophrenia and Parkinson's disease.<sup>2,4</sup>

### References

1. Stemp, G., Ashmeade, T., Branch, C. L., *et al.* Design and synthesis of *trans*-N-[4-[2-(6-cyano-1,2,3,4-tetrahydroisoquinolin-2-yl)ethyl]cyclohexyl]-4-quinolinecarboxamide (SB-277011): A potent and selective dopamine D<sub>3</sub> receptor antagonist with high oral bioavailability and CNS penetration in the rat. *J. Med. Chem.* **43**(9), 1878-1885 (2000).
2. Reavill, C., Taylor, S. G., Wood, M. D., *et al.* Pharmacological actions of a novel, high-affinity, and selective human dopamine D<sub>3</sub> receptor antagonist, SB-277011-A. *J. Pharmacol. Exp. Ther.* **294**(3), 1154-1165 (2000).
3. Heidbreder, C. A., Gardner, E. L., Xi, Z. X., *et al.* The role of central dopamine D<sub>3</sub> receptors in drug addiction: A review of pharmacological evidence. *Brain Res. Rev.* **49**(1), 77-105 (2005).
4. Carcinella, S., Drui, G., Boulet, S., *et al.* Implication of dopamine D<sub>3</sub> receptor activation in the reversion of Parkinson's disease-related motivational deficits. *Transl. Psychiatry* **4**(e401), (2014).

#### 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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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897  
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM