

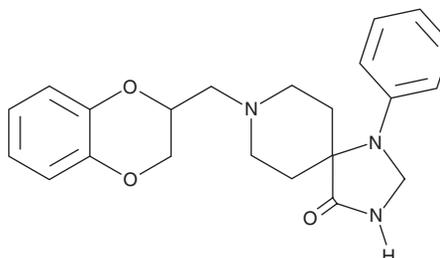
# PRODUCT INFORMATION



## Spiroxatrine

Item No. 33415

**CAS Registry No.:** 1054-88-2  
**Formal Name:** 8-[(2,3-dihydro-1,4-benzodioxin-2-yl)methyl]-1-phenyl-1,3,8-triazaspiro[4.5]decan-4-one  
**Synonym:** R-5188  
**MF:** C<sub>22</sub>H<sub>25</sub>N<sub>3</sub>O<sub>3</sub>  
**FW:** 379.5  
**Purity:** ≥98%  
**Supplied as:** A 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

Spiroxatrine is supplied as a solid. A stock solution may be made by dissolving the spiroxatrine in the solvent of choice, which should be purged with an inert gas. Spiroxatrine is slightly soluble (0.1-1 mg/ml) in acetonitrile and DMSO.

### Description

Spiroxatrine is an antagonist of the serotonin (5-HT) receptor subtype 5-HT<sub>1A</sub> (K<sub>i</sub> = 3 nM) and α<sub>2</sub>-adrenergic receptors (α<sub>2</sub>-ARs; K<sub>i</sub>s = 28, 1.3, and 1.8 nM for α<sub>2A</sub>, α<sub>2B</sub>, and α<sub>2C</sub>, respectively).<sup>1</sup> It is selective for these receptors over 5-HT<sub>1D</sub> (K<sub>i</sub> = 2 μM) and 5-HT<sub>1B</sub> at 10 μM. Spiroxatrine also induces calcium mobilization in CHO cells expressing the human nociception opioid peptide (NOP) receptor (EC<sub>50</sub> = 323 nM).<sup>2</sup> It inhibits decreases in mean arterial pressure induced by urapidil in anesthetized normotensive cats when administered at doses of 3 or 10 nmol/kg.<sup>3</sup> Spiroxatrine (2.5 and 5 mg/kg) induces catalepsy and catatonia in rats.<sup>4</sup> It enhances reductions in ethanol intake induced by fluoxetine in alcohol-preferring rats.<sup>5</sup>

### References

1. Sorbi, C., Tait, A., Battisti, U.M., *et al.* Spiroxatrine derivatives towards 5-HT<sub>1A</sub> receptor selectivity. *Pharmacol. Rep.* **72(2)**, 427-434 (2020).
2. Corrado, S., Battisti, U.M., Sorbi, C., *et al.* Synthesis and structure-activity relationships of triazaspirodecanone derivatives as nociceptin/orphanin FQ receptor ligands. *Chem. Biol. Drug Des.* **86(4)**, 447-458 (2015).
3. Kolassa, N., Beller, K.D., and Sanders, K.H. Involvement of brain 5-HT<sub>1A</sub> receptors in the hypotensive response to urapidil. *Am. J. Cardiol.* **64(7)**, 7D-10D (1989).
4. Costall, B. and Naylor, R.J. On catalepsy and catatonia and the predictability of the catalepsy test for neuroleptic activity. *Psychopharmacologia* **34(3)**, 233-241 (1974).
5. McBride, W.J., Murphy, J.M., Lumeng, L., *et al.* Spiroxatrine augments fluoxetine-induced reduction of ethanol intake by the P line of rats. *Pharmacol. Biochem. Behav.* **34(2)**, 381-386 (1989).

#### 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