

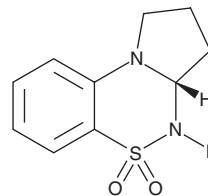
PRODUCT INFORMATION



S18986

Item No. 14937

CAS Registry No.: 175340-20-2
Formal Name: 2,3,3aS,4-tetrahydro-1H-pyrrolo[2,1-c][1,2,4]benzothiadiazine, 5,5-dioxide
MF: C₁₀H₁₂N₂O₂S
FW: 224.3
Purity: ≥98%
UV/Vis.: λ_{max}: 211, 256, 323 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

S18986 is supplied as a crystalline solid. A stock solution may be made by dissolving the S18986 in the solvent of choice, which should be purged with an inert gas. S18986 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of S18986 in these solvents is approximately 25 mg/ml.

S18986 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, S18986 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. S18986 has a solubility of approximately 0.03 mg/ml in a 1:30 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

S18986 is a positive allosteric modulator of α-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid (AMPA) receptors that potently enhances (S)-AMPA-mediated noradrenaline release in rat hippocampal and frontal cortex slices.¹ S18986 is orally bioavailable and penetrates the blood-brain barrier in animals.² Formulations containing S18986 improve episodic memory in rats.² S18986 is used to elucidate the roles of AMPA receptor signaling in cells and in animals.²⁻⁴

References

1. Lockhart, B., Iop, F., Closier, M., *et al.* (S)-2,3-dihydro-[3,4]cyclopentano-1,2,4-benzothiadiazine-1,1-dioxide: (S18986-1) a positive modulator of AMPA receptors enhances (S)-AMPA-mediated [3H] noradrenaline release from rat hippocampal and frontal cortex slices. *Eur. J. Pharmacol.* **401(2)**, 145-153 (2000).
2. Lebrun, C., Pillière, E., Lestage, P., *et al.* Effects of S 18986-1, a novel cognitive enhancer, on memory performances in an object recognition task in rats. *Eur. J. Pharmacol.* **401(2)**, 205-212 (2000).
3. Vandesquille, M., Carrié, I., Louis, C.F., *et al.* Effects of positive modulators of α-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid (AMPA)-type glutamate receptors in a benzodiazepine-induced deficit of spatial discrimination in mice. *J. Psychopharmacol.* **26(6)**, 845-856 (2012).
4. Yefimenko, N., Portero-Tresserra, M., Martí-Nicolovius, M., *et al.* The AMPA receptor modulator S18986 in the prelimbic cortex enhances acquisition and retention of an odor-reward association. *Neurosci. Lett.* **548**, 105-109 (2013).

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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