

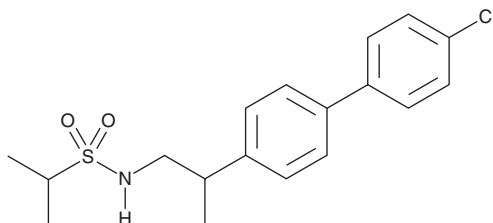
# PRODUCT INFORMATION



**LY404187**

Item No. 28741

**CAS Registry No.:** 211311-95-4  
**Formal Name:** N-[2-(4'-cyano[1,1'-biphenyl]-4-yl)propyl]-2-propanesulfonamide  
**MF:** C<sub>19</sub>H<sub>22</sub>N<sub>2</sub>O<sub>2</sub>S  
**FW:** 342.5  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 278 nm  
**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

LY404187 is supplied as a solid. A stock solution may be made by dissolving the LY404187 in the solvent of choice, which should be purged with an inert gas. LY404187 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of LY404187 in ethanol is approximately 3 mg/ml and approximately 15 mg/ml in DMSO and DMF.

LY404187 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, LY404187 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. LY404187 has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

## Description

LY404187 is a benzothiadiazide positive allosteric modulator of AMPA receptors.<sup>1</sup> It increases glutamate-induced activation of GluR1<sub>i</sub>, -2<sub>i</sub>, -2<sub>o</sub>, -3<sub>i</sub>, and -4<sub>i</sub> subunit-containing AMPA receptors with EC<sub>50</sub> values of 5.65, 0.15, 1.44, 1.66, and 0.21 μM, respectively, in a calcium influx assay. LY404187 is selective for these AMPA receptors over GluR6 subunit-containing kainate receptors at 10 μM. LY404187 increases currents induced by glutamate and AMPA in rat prefrontal cortex pyramidal neurons (EC<sub>50</sub>s = 1.3 and 1.2 μM, respectively) but not in AMPA-stimulated primary rat embryonic hippocampal or primary cerebellar Purkinje neurons.<sup>2,3</sup> LY404187 prevents decreases in the number of dopaminergic neurons in the substantia nigra induced by MPTP and 6-OHDA (Item No. 25330) in mouse and rat, respectively, models of Parkinson's disease when administered at a dose of 0.5 mg/kg per day.<sup>4</sup>

## References

1. Miu, P., Jarvie, K.R., Radhakrishnan, V., et al. Novel AMPA receptor potentiators LY392098 and LY404187: Effects on recombinant human AMPA receptors in vitro. *Neuropharmacology* **40(8)**, 976-983 (2001).
2. Baumbarger, P.J., Muhlhauser, M., Zhai, J., et al. Positive modulation of α-amino-3-hydroxy-5-methyl-4-isoxazole propionic acid (AMPA) receptors in prefrontal cortical pyramidal neurons by a novel allosteric potentiator. *J. Pharmacol. Exp. Ther.* **298(1)**, 86-102 (2001).
3. Gates, M., Ogden, A., and Bleakman, D. Pharmacological effects of AMPA receptor potentiators LY392098 and LY404187 on rat neuronal AMPA receptors in vitro. *Neuropharmacology* **40(8)**, 984-991 (2001).
4. O'Neill, M.J., Murray, T.K., Whalley, K., et al. Neurotrophic actions of the novel AMPA receptor potentiator, LY404187, in rodent models of Parkinson's disease. *Eur. J. Pharmacol.* **486(2)**, 163-174 (2004).

### 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.

### WARRANTY AND LIMITATION OF REMEDY

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