

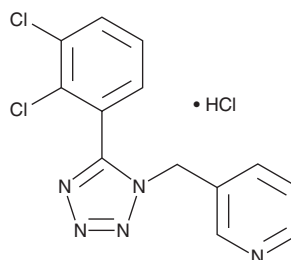
# PRODUCT INFORMATION



## A-438079 (hydrochloride)

Item No. 14580

**CAS Registry No.:** 899431-18-6  
**Formal Name:** 3-[[5-(2,3-dichlorophenyl)-1H-tetrazol-1-yl]methyl]-pyridine, monohydrochloride  
**MF:** C<sub>13</sub>H<sub>9</sub>Cl<sub>2</sub>N<sub>5</sub> • HCl  
**FW:** 342.6  
**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

A-438079 (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the A-438079 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. A-438079 (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of A-438079 (hydrochloride) in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

A-438079 (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, A-438079 (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. A-438079 (hydrochloride) has a solubility of approximately 0.33 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

A-438079 is a competitive antagonist of the nucleotide receptor P2X<sub>7</sub> (pIC<sub>50</sub> = 6.9).<sup>1</sup> It inhibits both calcium flux and IL-1β release mediated by P2X<sub>7</sub>, while not affecting the activity of other P2X receptors.<sup>1,2</sup> A-438079 is effective in evaluating the role of P2X<sub>7</sub> in nociception, oxidative stress, and apoptosis in cells and animals.<sup>3-5</sup>

### References

1. Nelson, D.W., Gregg, R.J., Kort, M.E., *et al.* Structure-activity relationship studies on a series of novel, substituted 1-benzyl-5-phenyltetrazole P2X<sub>7</sub> antagonists. *J. Med. Chem.* **49(12)**, 3659-3666 (2006).
2. Donnelly-Roberts, D.L. and Jarvis, M.F. Discovery of P2X<sub>7</sub> receptor-selective antagonists offers new insights into P2X<sub>7</sub> receptor function and indicates a role in chronic pain states. *Br. J. Pharmacol.* **151(5)**, 571-579 (2007).
3. McGaraughty, S., Chu, K.L., Namovic, M.T., *et al.* P2X<sub>7</sub>-related modulation of pathological nociception in rats. *Neuroscience* **146(4)**, 1817-1828 (2007).
4. Haanes, K.A., Schwab, A., and Novak, I. The P2X<sub>7</sub> receptor supports both life and death in fibrogenic pancreatic stellate cells. *PLoS One* **7(12)**, (2012).
5. Bartlett, R., Yerbury, J.J., and Sluyter, R. P2X<sub>7</sub> receptor activation induces reactive oxygen species formation and cell death in murine EOC13 microglia. *Mediators Inflamm.* **271813** (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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