

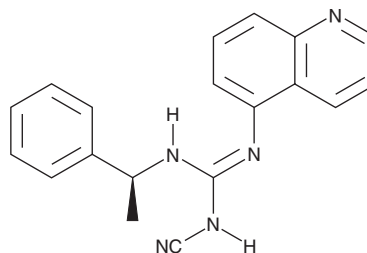
# PRODUCT INFORMATION



**A-804598**

Item No. 20060

**CAS Registry No.:** 1125758-85-1  
**Formal Name:** N-cyano-N'-[(1S)-1-phenylethyl]-N'-5-quinolinyl-guanidine  
**MF:** C<sub>19</sub>H<sub>17</sub>N<sub>5</sub>  
**FW:** 315.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 226, 304, 317 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

A-804598 is supplied as a crystalline solid. A stock solution may be made by dissolving the A-804598 in the solvent of choice, which should be purged with an inert gas. A-804598 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of A-804598 in these solvents is approximately 30 mg/ml.

A-804598 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, A-804598 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. A-804598 has a solubility of approximately 0.05 mg/ml in a 1:20 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-804598 is a potent and selective competitive antagonist of the purinergic P2X<sub>7</sub> receptor, a ligand-gated ion channel, with IC<sub>50</sub> values of 9.9 and 10.9 nM in 132N1 cells transfected with the rat or mouse receptor, respectively.<sup>1</sup> It inhibits IL-1β release in human THP-1 cells stimulated with LPS and IFN-γ (IC<sub>50</sub> = 8.5 nM). A-804598 is selective for P2X<sub>7</sub> receptors over other P2X and P2Y receptors at concentrations up to 100 μM and over many G protein-coupled receptors, enzymes, transporters, and ion channels. A-804598 (25 mg/kg) prevents footshock-induced increases in IL-1β mRNA in the paraventricular nucleus of the rat hypothalamus.<sup>2</sup>

## References

1. Donnelly-Roberts, D.L., Namovic, M.T., Surber, B., *et al.* [<sup>3</sup>H]A-804598 ([<sup>3</sup>H]2-cyano-1-[(1S)-1-phenylethyl]-3-quinolin-5-ylguanidine) is a novel, potent, and selective antagonist radioligand for P2X<sub>7</sub> receptors. *Neuropharmacology* **56(1)**, 223-229 (2009).
2. Cantazaro, J.M., Hueston, C.M., Deak, M.M., *et al.* The impact of the P2X<sub>7</sub> receptor antagonist A-804598 on neuroimmune and behavioral consequences of stress. *Behav. Pharmacol.* **25(5-6)**, 582-598 (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.

### WARRANTY AND LIMITATION OF REMEDY

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