

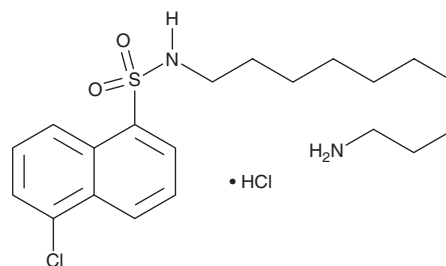
# PRODUCT INFORMATION



## A-7 (hydrochloride)

Item No. 16076

**CAS Registry No.:** 79127-24-5  
**Formal Name:** N-(10-aminodecyl)-5-chloro-1-naphthalenesulfonamide, monohydrochloride  
**MF:** C<sub>20</sub>H<sub>29</sub>ClN<sub>2</sub>O<sub>2</sub>S • HCl  
**FW:** 433.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 225, 296 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-7 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the A-7 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. A-7 (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of A-7 (hydrochloride) in these solvents is approximately 5 mg/ml.

A-7 (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, A-7 (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. A-7 (hydrochloride) has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Calmodulin is a calcium-dependent protein that regulates the activity of a diverse array of enzymes, ion channels, and other proteins and thus has diverse roles in cell function.<sup>1,2</sup> A-7 is an analog of the naphthalenesulfonamide W-7 (Item No. 14826) that has an acyl chain length of 10 carbons, rather than six. It is a potent cell-permeable antagonist of calmodulin that inhibits Ca<sup>2+</sup>/calmodulin cyclic nucleotide phosphodiesterase more potently than W-7 (IC<sub>50</sub> = 3.2 and 26 μM, respectively).<sup>3,4</sup>

### References

1. Benaim, G. and Villalobo, A. Phosphorylation of calmodulin. Functional implications. *Eur. J. Biochem.* **269**(15), 3619-3631 (2002).
2. Chin, D. and Means, A.R. Calmodulin: A prototypical calcium sensor. *Trends Cell Biol.* **10**(8), 322-328 (2000).
3. Hidaka, H. and Tanaka, T. Naphthalenesulfonamides as calmodulin antagonists. *Methods Enzymol.* **102**, 185-194 (1983).
4. Itoh, H. and Hidaka, H. Direct interaction of calmodulin antagonists with Ca<sup>2+</sup>/calmodulin-dependent cyclic nucleotide phosphodiesterase. *J. Biochem.* **96**(6), 1721-1726 (1984).

#### 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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