

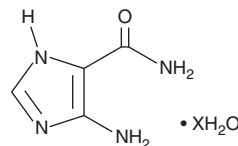
# PRODUCT INFORMATION



## 5-Aminoimidazole-4-carboxamide (hydrate)

Item No. 36927

**Formal Name:** 5-amino-1H-imidazole-4-carboxamide, hydrate  
**Synonym:** AIC  
**MF:**  $C_4H_6N_4O \cdot XH_2O$   
**FW:** 126.1  
**Purity:**  $\geq 95\%$   
**Supplied as:** A solid  
**Storage:**  $-20^\circ\text{C}$   
**Stability:**  $\geq 4$  years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

5-Aminoimidazole-4-carboxamide (AIC) (hydrate) is supplied as a solid. A stock solution may be made by dissolving the AIC (hydrate) in the solvent of choice, which should be purged with an inert gas. AIC (hydrate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of AIC (hydrate) in these solvents is approximately 10 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of AIC (hydrate) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of AIC (hydrate) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

AIC is an aminoimidazole and a synthetic precursor.<sup>1</sup> It has been used in the synthesis of the anticancer MTIC prodrug temozolomide (Item No. 14163).

### Reference

1. Stevens, M.F., Hickman, J.A., Stone, R., *et al.* Antitumor imidazotetrazines. 1. Synthesis and chemistry of 8-carbamoyl-3-(2-chloroethyl)imidazo[5,1-d]-1,2,3,5-tetrazin-4(3 H)-one, a novel broad-spectrum antitumor agent. *J. Med. Chem.* **27**(2), 196-201 (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.

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