

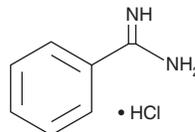
PRODUCT INFORMATION



Benzamidine (hydrochloride)

Item No. 20651

CAS Registry No.: 1670-14-0
Formal Name: benzenecarboximidamide, monohydrochloride
MF: C₇H₈N₂ • HCl
FW: 156.6
Purity: ≥98%
UV/Vis.: λ_{max}: 229 nm
Supplied as: A crystalline solid
Storage: Room temperature
Stability: ≥4 years



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

Laboratory Procedures

Benzamidine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the benzamidine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Benzamidine (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of benzamidine (hydrochloride) in ethanol is approximately 10 mg/ml and approximately 25 mg/ml in DMSO and DMF.

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 benzamidine (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of benzamidine (hydrochloride) in PBS, pH 7.2, is approximately 3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Benzamidine is a reversible inhibitor of serine proteases, including trypsin, plasmin, and thrombin (K_i s = 35, 350, and 220 μ M, respectively).¹⁻³ In addition to its use as a general serine protease inhibitor, benzamidine is used, when immobilized, to purify novel proteases.^{4,5}

References

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2. Markwardt, F., Landmann, H., and Walsmann, P. Comparative studies on the inhibition of trypsin, plasmin, and thrombin by derivatives of benzylamine and benzamidine. *Eur. J. Biochem.* **6(4)**, 502-506 (1968).
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4. Matsuura, Y., Yabu, T., Shiba, H., et al. Purification and characterization of a fish granzyme A involved in cell-mediated immunity. *Dev. Comp. Immunol.* **60**, 33-40 (2016).
5. Staffansson, B., Sandholt, G.B. and Gudmundsdottir, Á. Elucidation of different cold-adapted Atlantic cod (*Gadus morhua*) trypsin X isoenzymes. *Biochim Biophys. Acta.* **1865(1)**, 11-19 (2017).

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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