

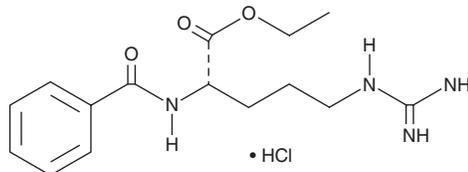
PRODUCT INFORMATION



N- α -Benzoyl-L-Arginine ethyl ester (hydrochloride)

Item No. 27183

CAS Registry No.: 2645-08-1
Formal Name: N²-benzoyl-L-arginine, ethyl ester, monohydrochloride
Synonyms: BAEE, Bz-Arg-OEt, NSC 86159
MF: C₁₅H₂₂N₄O₃ • HCl
FW: 342.8
Purity: ≥98%
UV/Vis.: λ_{max} : 227 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

N- α -Benzoyl-L-arginine ethyl ester (BAEE) (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the BAEE (hydrochloride) in the solvent of choice, which should be purged with an inert gas. BAEE (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of BAEE (hydrochloride) in ethanol and DMSO is approximately 10 mg/ml and approximately 33 mg/ml in 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 BAEE (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of BAEE (hydrochloride) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

BAEE is a nonpeptide substrate of proteases and deiminases.¹⁻⁵ It has been used as a substrate for the relative quantification of trypsin activity.^{1,2} BAEE has also been used as a substrate for the activity of subtilisins, kallikreins, and protein arginine deiminase 4 (PAD4).³⁻⁵

References

1. Crowell, A.M.J., Stewart, E.J., Take, Z.S., *et al.* Critical assessment of the spectroscopic activity assay for monitoring trypsin activity in organic-aqueous solvent. *Anal. Biochem.* **435**(2), 131-136 (2013).
2. Rajabi, M., Shareghi, B., Farhadian, S., *et al.* Evaluation of maltose on conformation and activity parameters of trypsin. *J. Biomol. Struct. Dyn.* **37**(17), 4557-4562 (2019).
3. Glazer, A.N. Esteratic reactions catalyzed by subtilisins. *J. Biol. Chem.* **242**(3), 433-436 (1967).
4. Ran, X., Zhang, Q., and Wang, D.W. Tissue kallikrein activity, detected by a novel method, may be a predictor of recurrent stroke: A case-control study. *Dis. Markers*, 159750 (2015).
5. Kearney, P.L., Bhatia, M., Jones, N.G., *et al.* Kinetic characterization of protein arginine deiminase 4: A transcriptional corepressor implicated in the onset and progression of rheumatoid arthritis. *Biochemistry* **44**(31), 10570-10582 (2005).

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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