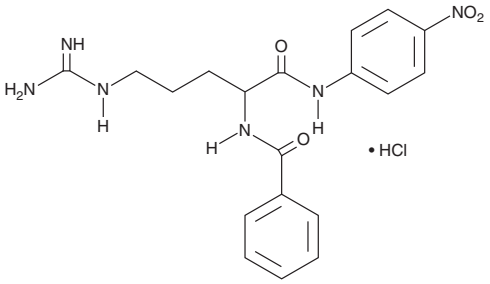
PRODUCT INFORMATION

N^{α}-Benzoyl-DL-Arginine-*p*NA (hydrochloride)

Item No. 33934

CAS Registry No.: 911-77-3
Formal Name: N-[4-[(aminoiminomethyl)amino]-1-[[(4-nitrophenyl)amino]carbonyl]butyl]-benzamide, monohydrochloride
Synonyms: N^{α}-Benzoyl-DL-Arginine-*p*-nitroanilide, DL-BAPNA, NSC 83264
MF: $C_{19}H_{22}N_6O_4 \bullet HCl$
FW: 434.9
Purity: ≥98%
UV/Vis.: λ_{max}: 225, 312 nm
Supplied as: A 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-DL-arginine-*p*NA (DL-BAPNA) (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the DL-BAPNA (hydrochloride) in the solvent of choice, which should be purged with an inert gas. DL-BAPNA (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of DL-BAPNA (hydrochloride) in these solvents is approximately 10 and 1 mg/ml, respectively.

DL-BAPNA (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, DL-BAPNA (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. DL-BAPNA (hydrochloride) has a solubility of approximately 0.11 mg/ml in a 1:8 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

DL-BAPNA is a colorimetric substrate for serine proteases, including β-secretase 1 (BACE1), calpain, and papain.[1,2] Serine proteases bind to and cleave DL-BAPNA to release *p*-nitroanilide (*p*NA), which can be quantified by colorimetric detection at 405 nm as a measure of serine protease activity.

References

1. Mancini, F., Naldi, M., Cavrini, V., *et al.* Multiwell fluorometric and colorimetric microassays for the evaluation of beta-secretase (BACE-1) inhibitors. *Anal. Bioanal. Chem.* **388(5-6)**, 1175-1183 (2007).
2. Chung, M.-C., Lee, H.-J., Chun, H.K., *et al.* Penicillide, a nonpeptide calpain inhibitor, produced by *Penicillium* sp. F60760. *J. Microbiol. Biotechnol.* **8(2)**, 188-190 (1998).

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