3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

Product Information

N_α-Benzoyl-L-arginine 4-nitroanilide hydrochloride

Catalog Number **B3279**
Storage Temperature –20 °C

CAS RN 21653-40-7
Synonyms: BANI, L-BAPA, L-BAPNA, N_α-Benzoyl-L-arginine *p*-nitroanilide hydrochloride

Product Description

Molecular Formula: $C_{19}H_{22}N_6O_4 \cdot HCl$
Molecular Weight: 434.88

N_α-Benzoyl-L-arginine 4-nitroanilide hydrochloride (L-BAPNA) is a colorless, chromogenic substrate for proteolytic enzymes such as trypsin, actinidin, and papain.[1-5] Hydrolysis of the L-BAPNA at the bond between the arginine and the *p*-nitroaniline moieties releases the chromophore *p*-nitroaniline, which can be detected by colorimetric analysis.

An assay for tryptase release from human lung mast cells that uses L-BAPNA has been published.[6] A multitarget functional bioassay for detection of anti-inflammatory natural products that incorporates L-BAPNA has been described.[7]

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

This product is soluble in DMSO (50 mg/ml), yielding a clear, colorless to light yellow solution. It is also soluble in acetone:water (1:1 v/v, 50 mg/ml) yielding a clear solution.

Storage/Stability

Store the product at –20 °C.

References

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3. Salih, E. et al., Differences in the chemical and catalytic characteristics of two crystallographically 'identical' enzyme catalytic sites. Characterization of actinidin and papain by a combination of pH-dependent substrate catalysis kinetics and reactivity probe studies targeted on the catalytic-site thiol group and its immediate micro-environment. Biochem. J., **247(1)**, 181-193 (1987).
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5. Dallas Johnson, K. et al., A functional comparison of ovine and porcine trypsins. Comp. Biochem. Physiol. B Biochem. Mol. Biol., **131(3)**, 423-431 (2002).
6. Lavens, S.E. et al., A sensitive colorimetric assay for the release of tryptase from human lung mast cells *in vitro*. J. Immunol. Methods, **166(1)**, 93-102 (1993).
7. Johansson, S. et al., A neutrophil multitarget functional bioassay to detect anti-inflammatory natural products. J. Nat. Prod., **65(1)**, 32-41 (2002).

EB,GCY,RXR,MAM 01/11-1