Nα-Benzoyl-DL-arginine β-naphthylamide hydrochloride

Product Number B 4750
Storage Temperature 2-8 °C

Product Description
Molecular Formula: C_{23}H_{25}N_{5}O_{2} • HCl
Molecular Weight: 439.9
CAS Number: 913-04-2
Melting Point: 197-198 °C
Fluorescence Properties:
Excitation Wavelength = 335 nm
Emission Wavelength = 410 nm
Synonym: BANA

Nα-Benzoyl-DL-β-naphthylamide hydrochloride is a chromogenic substrate for proteolytic enzymes such as trypsin, cathepsin B1, cathepsin H, and papain.

Hydrolysis of BANA at the bond between the arginine and the p-naphthylamine moieties releases the chromophore p-naphthylamine, which can be detected by colorimetric analysis. The use of BANA in assaying protease inhibitors from Nicotiana attenuata has been described.

BANA is also utilized in periodontal research and studies of related bacteria. A comparison of the BANA assay with other methods in the analysis of periodontal infections related to Porphyromonas gingivalis, Treponema denticola, and Bacteroides forsythus has been published. A plaque BANA hydrolysis assay has been used to probe the activity of Porphyromonas gingivalis and Actinobacillus actinomycetemcomitans in gingival vs. non-gingival samples.

Precautions and Disclaimer
For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions
This product is soluble in dimethylformamide (50 mg/ml), with heat as needed, yielding a clear, colorless to faint yellow solution. It is also soluble in DMSO (50 mM).

References

Sigma brand products are sold through Sigma-Aldrich, Inc. Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.