PRODUCT INFORMATION



Gly-Phe-β-naphthylamide

Item No. 14634

21438-66-4	
glycyl-N-2-naphthalenyl-L-	
phenylalaninamide	
H-Gly-Phe-BNA	
$C_{21}H_{21}N_{3}O_{2}$	
347.4	
≥95%	H ₂ N N
λ _{max} : 243, 283 nm	
A crystalline solid	Ĥ
-20°C	\sim \sim
≥4 years	
	21438-66-4 glycyl-N-2-naphthalenyl-L- phenylalaninamide H-Gly-Phe-BNA $C_{21}H_{21}N_3O_2$ 347.4 ≥95% λ_{max} : 243, 283 nm A crystalline solid -20°C ≥4 years

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

Laboratory Procedures

Gly-Phe β -naphthylamide is supplied as a crystalline solid. A stock solution may be made by dissolving the Gly-Phe- β -naphthylamide in the solvent of choice, which should be purged with an inert gas. Gly-Phe- β -naphthylamide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of Gly-Phe- β -naphthylamide in these solvents is approximately 1, 20, and 25 mg/ml, respectively.

Gly-Phe-β-naphthylamide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, Gly-Phe-β-naphthylamide should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Gly-Phe- β -naphthylamide has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Gly-Phe- β -naphthylamide is a substrate of cathepsin C that accumulates within the lysosome. Hydrolysis by cathepsin C degrades Gly-Phe- β -naphthylamide into fragments that do not easily diffuse through the lysosomal membrane, leading to a loss of lysosome membrane integrity.¹ This compound has been used to study intralysosomal hydrolysis, lysosomal membrane permeability, and the function of cathepsin C.^{1,2} At 50 μ M, Gly-Phe- β -naphthylamide can inhibit the cathepsin-dependent activation of caspase-8.³

References

- 1. Jadot, M., Colmant, C., Wattiaux-De Coninck, S., et al. Intralysosomal hydrolysis of glycyl-L-phenylalanine 2-naphthylamide. Biochem. J. 219(3), 965-970 (1984).
- 2. Qiu, G.F., Feng, H.Y., and Yamano, K. Expression and purification of active recombinant cathepsin C (dipeptidyl aminopeptidase I) of kuruma prawn Marsupenaeus japonicus in insect cells. J. Biomed. Biotechnol. 746289 (2009).
- 3. Baumgartner, H.K., Gerasimenko, J.V., Thorne, C., et al. Caspase-8-mediated apoptosis induced by oxidative stress is independent of the intrinsic pathway and dependent on cathepsins. Am. J. Physiol. Gastrointest. Liver Physiol. 293(1), 296-307 (2007).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFFTY 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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