

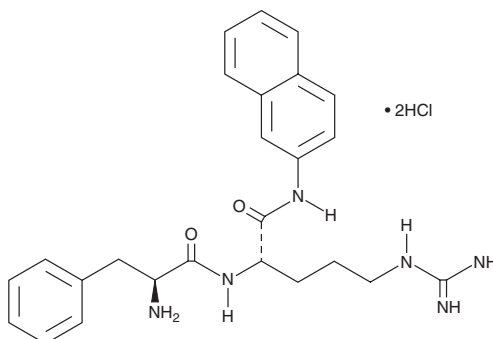
PRODUCT INFORMATION



Phe-Arg-βNA (hydrochloride)

Item No. 29511

CAS Registry No.: 100929-99-5
Formal Name: L-phenylalanyl-N-2-naphthalenyl-L-argininamide, dihydrochloride
MF: C₂₅H₃₀N₆O₂ • 2HCl
FW: 519.5
Purity: ≥98%
UV/Vis.: λ_{max}: 245, 251 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

Phe-Arg-βNA (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the Phe-Arg-βNA (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Phe-Arg-βNA (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of Phe-Arg-βNA (hydrochloride) in ethanol is approximately 2 mg/ml and approximately 10 mg/ml in DMSO and 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 Phe-Arg-βNA (hydrochloride) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of Phe-Arg-βNA (hydrochloride) in PBS, pH 7.2, is approximately 3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Phe-Arg-βNA is a peptide broad-spectrum bacterial efflux pump inhibitor.¹ It potentiates the activity of the fluoroquinolone antibiotic levofloxacin (Item No. 20382) against *P. aeruginosa* strains overexpressing the MexAB-OprM, MexCD-OprJ, or MexEF-OprN multidrug resistance efflux pumps (EC₅₀s = 10 μg/ml for all) but is inactive against these strains when used alone (MICs = >512 μg/ml for all). Phe-Arg-βNA also increases the susceptibility of quinolone-resistant *E. coli* isolates to nalidixic acid (Item No. 19807).²

References

1. Lomovskaya, O., Warren, M.S., Lee, A., *et al.* Identification and characterization of inhibitors of multidrug resistance efflux pumps in *Pseudomonas aeruginosa*: Novel agents for combination therapy. *Antimicrob. Agents Chemother.* **45**(1), 105-116 (2001).
2. Sáenz, Y., Ruiz, J., Zarazaga, M., *et al.* Effect of the efflux pump inhibitor Phe-Arg-β-naphthylamide on the MIC values of the quinolones, tetracycline and chloramphenicol, in *Escherichia coli* isolates of different origin. *J. Antimicrob. Chemother.* **53**(3), 544-545 (2004).

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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