
Product Data Sheet

Product Name: Boc-Gly-Arg-Arg-AMC

Cat. No.: GA21012

Chemical Properties

Cas. No. 113866-14-1

Formula C₂₉H₄₄N₁₀O₇ M.Wt 644.73

Solubility Soluble in DMSO Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure **Protocol****Protocol for protease assay [1]:**

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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1. Preparing an enzymatic reaction mixture with a total volume of 100 μ L containing standard buffer solution (Tris HCl buffer pH 8.5), a constant amount (0.57 μ mol/L) of DENV2 NS2B-NS3 solution and the candidate inhibitor compound (200 mg/L in DMSO).
2. The mixtures were incubated at 37°C and shaken at 200 rpm for 10 min, and then 10 mM of peptide substrate Boc-Gly-Arg-Arg-AMC was added to initiate the reaction and incubation with shaking at 200 rpm was carried out for another 60 min.
3. The assays were in triplicate and corrected by subtracting the absorbance of their respective blank.
4. The selected compounds were used to generate an IC_{50} value in the range (6.25-200 mg/L) of sample concentration.
5. The IC_{50} values were determined graphically from inhibition curves (log inhibitor concentration vs. percentage of inhibition) using graphpad module.

This protocol only provides a guideline, and should be modified according to your specific needs.

References:

- [1]. Osman H, Idris NH, et.al. 3,5-Bis(arylidene)-4-piperidones as potential dengue protease inhibitors. Acta Pharm Sin B. 2017 Jul;7(4):479-484. doi: 10.1016/j.apsb.2017.04.009. Epub 2017 May 4. PMID: 28752033; PMCID: PMC5518655.

Background

Boc-Gly-Arg-Arg-AMC is a substrate for flavivirus proteases such as West Nile virus protease, yellow fever virus NS3 protease, and dengue virus NS2B-NS3 protease. Boc-GRR-AMC is cleaved by type II Metacaspases Atmc4 and Atmc9 of Arabidopsis thaliana. Stock solutions of Boc-GRR-AMC are best prepared in DMSO [1-2].

References:

- [1]. Osman H, Idris NH, et.al. 3,5-Bis(arylidene)-4-piperidones as potential dengue protease inhibitors. Acta Pharm Sin B. 2017 Jul;7(4):479-484. doi: 10.1016/j.apsb.2017.04.009. Epub 2017 May 4. PMID: 28752033; PMCID: PMC5518655.

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[2]. Abduraman MA, Hariono M, et,al. Development of a NS2B/NS3 protease inhibition assay using AlphaScreen® beads for screening of anti-dengue activities. Heliyon. 2018 Dec 8;4(12):e01023. doi: 10.1016/j.heliyon.2018.e01023. PMID: 30560214; PMCID: PMC6289942.

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