
Product Data Sheet

Product Name: H-Gly-Arg-AMC

Cat. No.: GA22410

Chemical Properties

Cas. No. 65147-19-5

Formula $C_{18}H_{24}N_6O_4$ M.Wt 388.43Solubility DMSO : 125 mg/mL (321.82 mM; Need ultrasonic); H₂O : \geq 50 mg/mL (128.73 mM) 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 **Background**

H-Gly-Arg-AMC is a fluorogenic substrate for cathepsin C, with maximum excitation/emission wavelengths of 340-360/440-460nm. When cleaved by cathepsin C, 7-amino-4-methylcoumarin (AMC) is liberated, and its fluorescence serves to measure the activity of cathepsin C^[1]. H-Gly-Arg-AMC contains the AMC group and can be used to assess the activity of various proteases and peptidases. AMC has been widely used for monitoring the activity of aminopeptidases, dipeptidases, and carboxypeptidases. The H- can improve the water solubility of peptide substrates, optimize the kinetic parameters of the substrates (such as K_M and k_{cat}), enhance the specificity of the substrates, and improve their biocompatibility^[2].

References:

[1] Rubach JK, Cui G, Schneck JL, et al. The amino-acid substituents of dipeptide substrates of cathepsin C can determine the rate-limiting steps of catalysis. *Biochemistry*. 2012;51(38):7551-7568.

[2] van Berkel SS, van der Lee B, van Delft FL, Wagenvoord R, Hemker HC, Rutjes FP. Fluorogenic peptide-based substrates for monitoring thrombin activity. *ChemMedChem*.

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

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2012;7(4):606-617.

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