Product Data Sheet

Product Name: Tos-Gly-Pro-Arg-AMC . HCl
Cat. No.: GA23623

Chemical Properties

Cas. No.	117961-27-0		
Formula	$C_{30}H_{37}N_7O_7S \cdot HCl$	M.Wt	676.19
Solubility	Soluble in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	Tos-Gly-Pro-Arg-AMC . HCl		

Protocol

[illegible]
[illegible][1][2][illegible]
1. [illegible]
[illegible]Tos-Gly-Pro-Arg-AMC . HCl[illegible]50mM Tris-HCl[illegible]pH 8.0[illegible]10mM[illegible]
[illegible]100μM[illegible]
2. [illegible]
A: [illegible]50mg[illegible]Krebs[illegible]-80℃[illegible]
B: [illegible]15min[illegible]
3. [illegible]
A:[illegible]96[illegible]
B:[illegible]20min[illegible]
C:[illegible]380nm[illegible]460nm[illegible]AMC[illegible]
[illegible]
1[illegible]
2[illegible]pH[illegible]

References:

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[1]. Ceuleers H, Hanning N, Heirbaut J, et al. Newly developed serine protease inhibitors decrease visceral hypersensitivity in a post?inflammatory rat model for irritable bowel syndrome[J]. British Journal of Pharmacology, 2018, 175(17): 3516-3533.

[2]. Corvo I, Cancela M, Cappetta M, et al. The major cathepsin L secreted by the invasive juvenile Fasciola hepatica prefers proline in the S2 subsite and can cleave collagen[J]. Molecular and biochemical parasitology, 2009, 167(1): 41-47.

Background

Tos-Gly-Pro-Arg-AMC . HCl is a fluorescent substrate for thrombin, which is widely used to detect serine protease activity. Its excitation and emission wavelengths are 380nm and 460nm, respectively.

The core structure of Tos-Gly-Pro-Arg-AMC . HCl contains a fluorescent group 7-amino-4-methylcoumarin (AMC). When the substrate is hydrolyzed by protease, AMC is released, generating a strong fluorescent signal (excitation wavelength 380nm, emission wavelength 460nm). The Gly-Pro-Arg sequence is a specific recognition site for thrombin, so this substrate is highly selective for thrombin and is also suitable for the study of other serine proteases (such as trypsin, kallikrein, etc.). Tos-Gly-Pro-Arg-AMC . HCl can also be used for high-throughput screening of thrombin inhibitors or for detecting thrombin activity in blood samples to assist in the diagnosis of coagulation abnormalities[1][2].

References:
[1]. Corvo I, Cancela M, Cappetta M, et al. The major cathepsin L secreted by the invasive juvenile Fasciola hepatica prefers proline in the S2 subsite and can cleave collagen[J]. Molecular and biochemical parasitology, 2009, 167(1): 41-47.
[2]. Wirsching F, Luge C, Schwienhorst A. Modular design of a novel chimeric protein with combined thrombin inhibitory activity and plasminogen-activating potential[J]. Molecular genetics and metabolism, 2002, 75(3): 250-259.

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