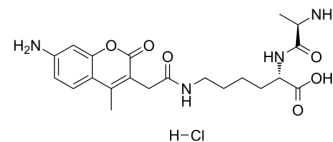


D-Ala-Lys-AMCA hydrochloride

Cat. No.:	HY-111956B
CAS No.:	2703746-41-0
Molecular Formula:	C ₂₁ H ₂₉ ClN ₄ O ₆
Molecular Weight:	468.93
Target:	Fluorescent Dye
Pathway:	Others
Storage:	Sealed storage, away from moisture and light Powder -80°C 2 years -20°C 1 year * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

H₂O : 100 mg/mL (213.25 mM; Need ultrasonic)
 DMSO : 100 mg/mL (213.25 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.1325 mL	10.6626 mL	21.3251 mL
	5 mM	0.4265 mL	2.1325 mL	4.2650 mL
	10 mM	0.2133 mL	1.0663 mL	2.1325 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: ≥ 2.5 mg/mL (5.33 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
 Solubility: ≥ 2.08 mg/mL (4.44 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

D-Ala-Lys-AMCA hydrochloride is a known proton-coupled oligopeptide transporter 1 (PEPT1) substrate that emits blue fluorescence. D-Ala-Lys-AMCA hydrochloride may be transported into liver cancer cells and Caco-2 cells based on fluorescence analysis. D-Ala-Lys-AMCA hydrochloride can be used for characterizing PEPT1-specific substrates or inhibitors [1][2].

In Vitro

D-Ala-Lys-AMCA (25, 50 and 150 μM, 3 h) hydrochloride may be transported into liver cancer and Caco-2 cells^[1]. D-Ala-Lys-AMCA (25 μM, 10 min) hydrochloride can be uptaken by absorptive enterocytes of all small intestine segments, whereas there is a complete lack of fluorescence in colonic samples^[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Groneberg DA, et al. Intestinal peptide transport: ex vivo uptake studies and localization of peptide carrier PEPT1. Am J Physiol Gastrointest Liver Physiol. 2001 Sep;281(3):G697-704.
- [2]. Gong Y, et al. Specific expression of proton-coupled oligopeptide transporter 1 in primary hepatocarcinoma-anovel strategy for tumor-targeted therapy. Oncol Lett. 2017 Oct;14(4):4158-4166.
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Caution: Product has not been fully validated for medical applications. For research use only.

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