Z-Ala-Ala-Asn-AMC

Cat. No.: HY-136626

CAS No.: 149697-16-5

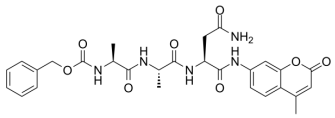
Molecular Formula: $C_{28}H_{31}N_5O_8$

Molecular Weight: 565.57

Target: Others

Pathway: Others

Storage: Sealed storage, away from moisture
Powder -80°C 2 years
-20°C 1 year
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (88.41 mM; Need ultrasonic)
H_2O : < 0.1 mg/mL (ultrasonic) (insoluble)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.7681 mL	8.8406 mL	17.6813 mL
	5 mM	0.3536 mL	1.7681 mL	3.5363 mL
	10 mM	0.1768 mL	0.8841 mL	1.7681 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (4.42 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (4.42 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (4.42 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Z-Ala-Ala-Asn-AMC (Cbz-Ala-Ala-Asn-AMC) is the legumain substrate. Overexpressed legumain in 293 HEK-Leg cells potently cleaved CBZ-Ala-Ala-Asn-AMC[1].

In Vitro

The first legumain fluorogenic substrate Cbz-Ala-Ala-Asn-AMC based on the P3-P2-P1 sequence Ala-Ala-Asn. The synthetic substrate Cbz-Ala-Ala-Asn-AMC is effectively cleaved by S. mansoni legumain and human legumain with K_ms of 90 and 80 uM respectively[2][3].

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

CUSTOMER VALIDATION

- Cell Death Dis. 2020 Nov 26;11(11):1014.
- Clin Genet. 2022 Nov 13.

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REFERENCES

[1]. Stern L, Perry R, Ofek P, Many A, Shabat D, Satchi-Fainaro R. A novel antitumor prodrug platform designed to be cleaved by the endoprotease legumain. Bioconjug Chem. 2009;20(3):500-510.

[2]. James C. Powers, et al. Propenoyl hydrazides. US7482379B2.

[3]. Poreba M, et al. Counter Selection Substrate Library Strategy for Developing Specific Protease Substrates and Probes. Cell Chem Biol. 2016;23(8):1023-1035.

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