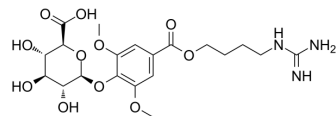


ZYZ-488

Cat. No.:	HY-100472
CAS No.:	1470302-79-4
Molecular Formula:	C ₂₀ H ₂₉ N ₃ O ₁₁
Molecular Weight:	487.46
Target:	Caspase
Pathway:	Apoptosis
Storage:	4°C, stored under nitrogen
	* In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 200 mg/mL (410.29 mM; Need ultrasonic)
 H₂O : ≥ 100 mg/mL (205.15 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.0515 mL	10.2573 mL	20.5145 mL
	5 mM	0.4103 mL	2.0515 mL	4.1029 mL
	10 mM	0.2051 mL	1.0257 mL	2.0515 mL

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 5 mg/mL (10.26 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 5 mg/mL (10.26 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 5 mg/mL (10.26 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

ZYZ-488 is a competitive apoptotic protease activating factor-1 (Apaf-1) inhibitor. ZYZ-488 inhibits the activation of binding protein procaspase-9 and procaspase-3^[1].

IC₅₀ & Target

Apoptotic protease activating factor-1^[1]

In Vitro

ZYZ-488 decreases apoptosis in hypoxic H9c2 cells. ZYZ-488 inhibits hypoxia induced Apaf-1-mediated activation of procaspase-9 and procaspase-3^[1].

ZYZ-488 decreases myocardial enzyme release, inhibits cardiomyocyte apoptosis, and suppresses the activation of the downstream cascade of caspases^[2].

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

In Vivo

ZYZ-488 (33.9-67.8 mg/kg; intramuscularly; for 3 days) protected against myocardial apoptosis^[2].

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

Animal Model:	Male C57BL/6 mice (8-10 weeks old) ^[2]
Dosage:	myocardial infarction + ZYZ-488 (33.9 mg/kg); myocardial infarction + ZYZ-488 (67.8 mg/kg);
Administration:	Intramuscularly; for 3 days
Result:	Inhibited Apaf-1-mediated activation of procaspase-9 and procaspase-3.

REFERENCES

[1]. Wang Y, et al. The discovery of a novel inhibitor of apoptotic protease activating factor-1 (Apaf-1) for ischemic heart: synthesis, activity and target identification. Sci Rep. 2016 Jul 22;6:29820.

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

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