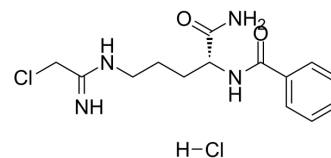


D-Cl-amidine hydrochloride

Cat. No.:	HY-100574D
Molecular Formula:	C ₁₄ H ₂₀ Cl ₂ N ₄ O ₂
Molecular Weight:	347.24
Target:	Protein Arginine Deiminase; Apoptosis
Pathway:	Epigenetics; Apoptosis
Storage:	-20°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 80 mg/mL (230.39 mM); ultrasonic and warming and heat to 60°C					
	H ₂ O : 16.67 mg/mL (48.01 mM); ultrasonic and warming and heat to 60°C					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		2.8799 mL	14.3993 mL	28.7985 mL
5 mM			0.5760 mL	2.8799 mL	5.7597 mL	
	10 mM		0.2880 mL	1.4399 mL	2.8799 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: PBS Solubility: 10 mg/mL (28.80 mM); Clear solution; Need ultrasonic Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.67 mg/mL (7.69 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.67 mg/mL (7.69 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.67 mg/mL (7.69 mM); Clear solution 					

BIOLOGICAL ACTIVITY

Description	D-Cl-amidine hydrochloride is a potent and highly selective PAD1 inhibitor. D-Cl-amidine is well-tolerated with no significant toxicity ^[1] .
In Vitro	D-Cl-amidine (200-400 μM) is effective in significantly decreasing cell viability in MDA-MB-231 cells ^[1] . D-Cl-amidine increase caspase 3 activity, indicating that inhibition of PAD1 leads to an increase in apoptosis ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

D-Cl-amidine, administered by iv at a dose of 2.5 mg/kg, is still detected after 2 h in serum at a concentration of ~21 nM and at 4 h at ~10 nM. D-Cl-amidine is still observed in the blood serum at a concentration of ~10 nM at 4 h when administered by ip at a dose of 10 mg/kg^[1].

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

REFERENCES

[1]. Bicker KL, et al. D-amino acid based protein arginine deiminase inhibitors: Synthesis, pharmacokinetics, and in cellulo efficacy. ACS Med Chem Lett. 2012 Oct 26;3(12):1081-1085.

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

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