BB-Cl-Amidine

Cat. No.: HY-111347

CAS No.: 1802637-39-3

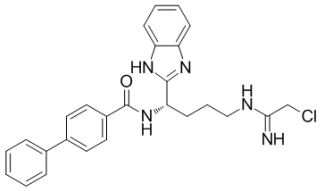
Molecular Formula: $C_{26}H_{26}ClN_5O$

Molecular Weight: 459.97

Target: Protein Arginine Deiminase

Pathway: Epigenetics

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (271.76 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.1741 mL	10.8703 mL	21.7405 mL
	5 mM	0.4348 mL	2.1741 mL	4.3481 mL
	10 mM	0.2174 mL	1.0870 mL	2.1741 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: ≥ 2.08 mg/mL (4.52 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (4.52 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.52 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

BB-Cl-Amidine is a peptidylarginine deminase (PAD) inhibitor.

IC_{50} & Target

PAD[1].

In Vivo

Treatment with BB-Cl-amidine subtly reduces splenomegaly in MRL/lpr mice, while there is a trend towards increased circulating levels of anti-NET antibodies with PAD inhibitor treatment. However, neither PAD inhibitor affected body weight or total IgG levels. Indeed, treatment with both Cl-amidine and BB-Cl-amidine significantly improves endothelium-dependent vasorelaxation. The BB-Cl-amidine group also shows a strong trend towards downregulation of IRGs. Treatment with either Cl-amidine or BB-Cl-amidine significantly improves muzzle alopecia, in many cases preventing it entirely[1].

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

Animal Model:	MRL/lpr mice[1].
Dosage:	1 mg/kg.
Administration:	Subcutaneous injection daily from 8 to 14 weeks of age.
Result:	Significantly improved endothelium-dependent vasorelaxation and showed a strong trend towards downregulation of IRGs.

REFERENCES

[1]. Knight JS, et al. Peptidylarginine deiminase inhibition disrupts NET formation and protects against kidney, skin and vascular disease in lupus-prone MRL/lpr mice. Ann Rheum Dis. 2015 Dec;74(12):2199-206.

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