EB-47 dihydrochloride

Cat. No.: HY-108631

CAS No.: 1190332-25-2

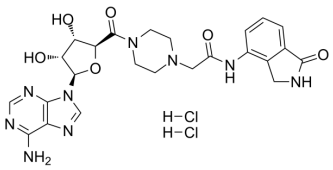
Molecular Formula: $C_{24}H_{29}Cl_2N_9O_6$

Molecular Weight: 610.45

Target: PARP

Pathway: Cell Cycle/DNA Damage; Epigenetics

Storage: 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 62.5 mg/mL (102.38 mM; Need ultrasonic)
H_2O : 33.33 mg/mL (54.60 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.6381 mL	8.1907 mL	16.3814 mL
5 mM	0.3276 mL	1.6381 mL	3.2763 mL
10 mM	0.1638 mL	0.8191 mL	1.6381 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 2.94 mg/mL (4.82 mM); Clear solution; Need ultrasonic and warming and heat to 60°C
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (4.10 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (4.10 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (4.10 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

EB-47 dihydrochloride, a potent and selective PARP-1/ARTD-1 inhibitor with an IC_{50} value of 45 nM, shows modest potency against ARTD5 with an IC_{50} value of 410 nM. EB-47 mimics the substrate NAD^+ and extends from the nicotinamide to the adenosine subsite[1].

In Vitro

EB-47 dihydrochloride shows inhibition in excess of 50% with CdPARP, and it is able to inhibit CdPARP and HsPARP with IC_{50} values of 0.86 and 1.0 μM, respectively[1].

	MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	EB-47 dihydrochloride (2 μM; 5 days) decreases the number of embryo implantation sites and blastocysts at day 5. PARP1 participates in the process of embryo implantation[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Nucleic Acids Res. 2023 Jun 16;gkad515.
- Research Square Preprint. 2022 Feb.

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REFERENCES

[1]. Haikarainen T, et al. Evaluation and Structural Basis for the Inhibition of Tankyrases by PARP Inhibitors.ACS Med Chem Lett. 2013 Nov 20;5(1):18-22.

[2]. García-Saura AG, et al. Comparative inhibitory profile and distribution of bacterial PARPs, using Clostridioides difficile CD160 PARP as a model. Sci Rep. 2018 May 23;8(1):8056.

[3]. Jagtap PG, et al. The discovery and synthesis of novel adenosine substituted 2,3-dihydro-1H-isoindol-1-ones: potent inhibitors of poly(ADP-ribose) polymerase-1 (PARP-1).Bioorg Med Chem Lett. 2004 Jan 5;14(1):81-5.

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