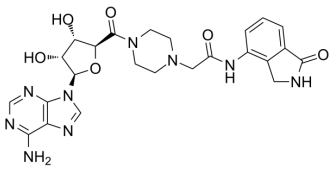
EB-47

Cat. No.:	HY-15046
CAS No.:	366454-36-6
Molecular Formula:	$C_{24}H_{27}N_9O_6$
Molecular Weight:	537.53
Target:	PARP
Pathway:	Cell Cycle/DNA Damage; Epigenetics
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	EB-47, 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].
IC_{50} & Target	ARTD1/PARP1 45 nM (IC_{50})
In Vitro	EB-47 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 (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

- 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]. Joshi A, et al.PARP1 during embryo implantation and its upregulation by oestradiol in mice.Reproduction. 2014 Jun;147(6):765-80.

[4]. 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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