## Olaparib-d<sub>4</sub>-1

Cat. No.:	HY-10162S3			
CAS No.:	2143107-55-3			
Molecular Formula:	$C_{24}H_{19}D_4FN_4O_3$			
Molecular Weight:	438.49			
Target:	PARP; Autophagy; Mitophagy; Isotope-Labeled Compounds			
Pathway:	Cell Cycle/DNA Damage; Epigenetics; Autophagy; Others			
Storage:	Powder	-20°C	3 years	
		4°C	2 years	
	In solvent	-80°C	6 months	
		-20°C	1 month	



Product Data Sheet

BIOLOGICAL ACTIV	
Description	Olaparib-d <sub>4</sub> -1 is the deuterium labeled Olaparib. Olaparib (AZD2281; KU0059436) is a potent and orally active PARP inhibitor with IC50s of 5 and 1 nM for PARP1 and PARP2, respectively. Olaparib is an autophagy and mitophagy activator[1][2][3][4].
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## REFERENCES

BIO

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. Bian X, et al. PTEN deficiency sensitizes endometrioid endometrial cancer to compound PARP-PI3K inhibition but not PARP inhibition as monotherapy. Oncogene. 2018 Jan 18;37(3):341-351.

[3]. Yasukawa M, et al. Synergetic Effects of PARP Inhibitor AZD2281 in Oral Squamous Cell Carcinoma in Vitro and in Vivo. Int J Mol Sci. 2016 Feb 24;17(3):272.

[4]. Menear KA, et al. 4-[3-(4-cyclopropanecarbonylpiperazine-1-carbonyl)-4-fluorobenzyl]-2H-phthalazin-1-one: a novel bioavailable inhibitor of poly(ADP-ribose) polymerase-1. J Med Chem. 2008 Oct 23;51(20):6581-91

[5]. Senra JM, et al. Inhibition of PARP-1 by olaparib (AZD2281) increases the radiosensitivity of a lung tumor xenograft.Mol Cancer Ther. 2011 Oct;10(10):1949-58.

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

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