NEUROMICS

Olaparib Data Sheet

Catalog Number:	MC11077	**Product Type:**	Small Molecule
Bio-Activity:	PARP1 inhibitor	**CAS #:**	763113-22-0
Research Categories:	Cancer, inflammation	**Chemical Name:**	4-(3-(4-(Cyclopropanecarbonyl)piperazine-1-carbonyl)-4-fluorobenzyl)phthalazine-1(2H)-one
Solubility:	Soluble in DMSO (up to 33 mg/ml) or in Ethanol (up to 1.7 mg/ml)	**Molecular Formula:**	C24H23FN4O3
Purity:	> 98%	**Molecular Weight:**	434.47
Format:	Powder	**Ship Temp:**	Ambient
Storage:	-20°C		

Application Notes

Description/Data:
A highly potent and selective PARP-inhibitor with IC_{50} values of 5 nM and 1 nM for PARP-1 and PARP-2, respectively [1]. In a genetically engineered mouse model for BRCA1-associated breast cancer olaparib inhibited tumor growth and improved survival with no signs of toxicity [2]. Synergizes with many other anticancer agents [3]. Shows efficacy in colorectal cancers [4]. Prevents house dust mite allergen-induced asthma in a mouse model [5].

References:

1) Menear et al. (2008), 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. 51 6581

2) Rottenberg et al. (2008), High sensitivity of BRCA1-deficient mammary tumors to the PARP inhibitor AZD2281 alone and in combination with platinum drugs; Proc.Natl.Acad.Sci.USA 105 17079

3) Avila-Arroyo et al. (2015), Synergistic effect of Trabectedin and Olaparib combination regimen in breast cancer cell lines; J.Breast Cancer 18 329

4) Xu et al. (2015), Combined olaparib and oxaliplatin inhibits tumor proliferation and induces G2/M arrest and γ-H2AX foci formation in colorectal cancer; Onco.Targets Ther. 8 3047

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5) Ghonim et al. (2015), PARP is activated in human asthma and its inhibition by olaparib blocks house dust mite-induced disease in mice; Clin.Sci.(Lond) 129 951

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