

Product Datasheet

AZD-5305

Catalog No. **BP-02031** · CAS **2589531-76-8** · Form **free base** · Physical state **other** · Color **Off-white to light yellow** · Version **1.0** · Revision **2026-09-02**

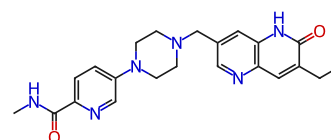
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Target PARP	Research area Cancer
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Molecular formula **C₂₂H₂₆N₆O₂**

Molecular weight **406.4808**

STRUCTURE



DESCRIPTION

AZD5305 is a potent, selective and oral active PARP inhibitor. AZD5305 is potent and efficacious in animal xenografts and PDX models.

BIOLOGICAL ACTIVITY

n Vitro

Saruparib (AZD5305) (0.1 nM-100 μM) inhibits PARylation in A549 WT cells by selectively blocking PARP1 enzymatic activity with an IC₅₀ value of 2.3 nM.

AZD5305 (0.1 nM-100 μM; A549 WT cells) is a potent and selective trapper of PARP1 in a dose-dependent manner by single digit nanomolar concentrations.

AZD5305 (0.1 nM-100 μM; 48 h; DLD1 WT and DLD1 BRCA2-/-) has anti-proliferative activity and targets cancer cells with HRR-deficiency, inducing DNA damage accumulation and cell-cycle arrest.

In Vivo

Saruparib (AZD5305) (0.01-0.3 mg/kg; p.o.; daily, for 35 d; female Han Wistar rats) demonstrates sustained antitumor activity in BRCAm xenograft and PDX models in vivo.

SOLUBILITY

Soluble in DMSO

In vitro DMSO : 25 mg/mL

REFERENCES

[1]. Illuzzi G, et, al. Preclinical Characterization of AZD5305, A Next-Generation, Highly Selective PARP1 Inhibitor and Trapper. Clin Cancer Res. 2022 Nov 1;28(21):4724-4736.

[2]. Johannes JW, et, al. Discovery of 5-{4-[(7-Ethyl-6-oxo-5,6-dihydro-1,5-naphthyridin-3-yl)methyl]piperazin-1-yl}-N-methylpyridine-2-carboxamide (AZD5305): A PARP1-DNA Trapper with High Selectivity for PARP1 over PARP2 and Other PARPs. J Med Chem. 2021 Oct 14;64(19):14498-14512.

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