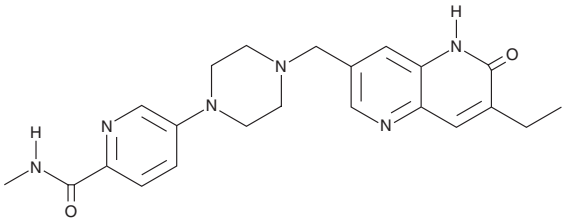
PRODUCT INFORMATION

AZD 5305

Item No. 37769

CAS Registry No.:	2589531-76-8
Formal Name:	5-[4-[(7-ethyl-5,6-dihydro-6-oxo-1,5-naphthyridin-3-yl) methyl]-1-piperazinyl]-N-methyl-2-pyridinecarboxamide
MF:	$C_{22}H_{26}N_6O_2$
FW:	406.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 222, 330 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

AZD 5305 is supplied as a solid. A stock solution may be made by dissolving the AZD 5305 in the solvent of choice, which should be purged with an inert gas. AZD 5305 is soluble in organic solvents such as DMSO, and dimethyl formamide. The solubility of AZD 5305 in these solvents is approximately 0.1 and 0.5 mg/ml, respectively.

Description

AZD 5305 is an inhibitor of poly(ADP-ribose) polymerase 1 (PARP1; IC_{50} = 0.003 µM).[1] It is selective for PARP1 over PARP2, PARP3, PARP5a, and PARP6 (IC_{50}s = 1.4, 3.4, >89, and 26 µM, respectively). AZD 5305 inhibits the proliferation of *BRCA2*$^{-/-}$ DLD-1 colorectal cancer cells (IC_{50} = 0.002 µM). It induces tumor regression in a patient-derived xenograft (PDX) mouse model of *BRCA1* mutant triple-negative breast cancer (TNBC) when administered at doses ranging from 0.3 to 10 mg/kg.

Reference

1. Johannes, J.W., Balazs, A., Barratt, D., *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.* **64(19)**, 14498-14512 (2021).

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