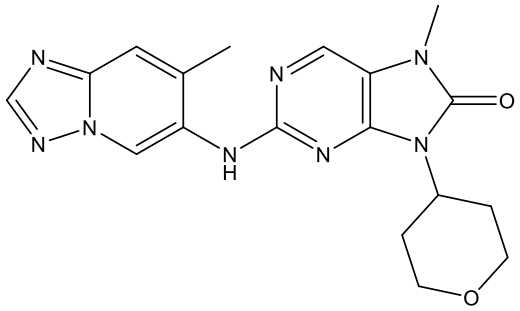
Catalog #10-4108

AZD7648

CAS# 2230820-11-6

7-Methyl-2-[(7-methyl-[1,2,4]triazolo[1,5-a]pyridine-6-yl)amino]-9-(oxan-4-yl)purin-8-one

Lot # FBA94036



AZD7648 is a very potent and selective (against 397 kinases) DNA-PK inhibitor (pIC_{50} = 9.2; cellular pIC50 = 7.0).[1] It is a sensitizer of radiation- and doxorubicin-induced DNA damage and sustained tumor regression in xenograft and patient-derived xenograft models.[2] AZD7648 significantly enhances precise CRISPR/Cas9 gene editing alone[3,4,5] or in combined treatment with a DNA polymerase theta inhibitor (2iHDR cocktail)[5].

1) Goldberg *et al.* (2020), *The Discovery of 7-Methyl-2-[(7-methyl[1,2,4]triazolo[1,5-a]pyridine-6-yl)amino]-9-(tetrahydro-2H-pyran-4-yl)-7,9-dihydro-8H-purin-8-one (AZD7648), a Potent and Selective DNA-Dependent Protein Kinase (DNA-PK) Inhibitor*; J. Med. Chem. **63** 3461
2) Fok *et al.* (2019), *AZD7648 is a potent and selective DNA-PK inhibitor that enhances radiation, chemotherapy and Olaparib activity*; Nat. Commun. **10** 5065
3) Cloarec-Ung *et al.* (2024), *Near-perfect precise on-target editing of human hematopoietic stem and progenitor cells*; Elife **12** RP91288
4) Selvaraj *et al.* (2024), *High-efficiency transgene integration by homology-directed repair in human primary cells using DNA-PKcs inhibition*; Nat. Biotech. **42** 731
5) Wimberger *et al.* (2023), *Simultaneous inhibition of DNA-PK and PolΘ improves integration efficiency and precision of genome editing*; Nat. Commun. **14** 4761

PHYSICAL DATA

Molecular Weight:	380.41
Molecular Formula:	$C_{18}H_{20}N_8O_2$
Purity:	>98% (HPLC)
	NMR: (Conforms)
Solubility:	DMSO (5 mg/mL with warming)
Physical Description:	White solid
Storage and Stability:	Store as supplied at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

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