

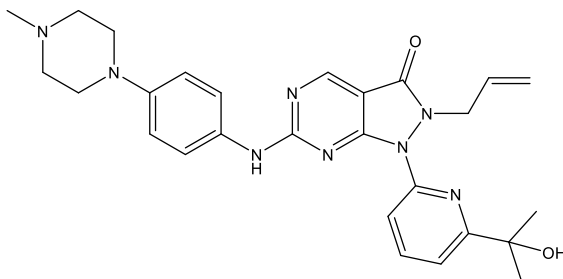
Catalog # 10-4823

Adavosertib

CAS# 955365-80-7

1,2-Dihydro-1-[6-(1-hydroxy-1-methylethyl)-2-pyridinyl]-6-[[4-(4-methyl-1-piperazinyl)-phenyl]amino]-2-(2-propen-1-yl)-3H-pyrazolo[3,4-d]pyrimidin-3-one; MK-1775; AZD1775

Lot # X109622



Inhibits Wee1 tyrosine kinase ($IC_{50} = 5.2$ nM) thus preventing phosphorylation of CDC2 and abrogating the G₂ DNA damage checkpoint, sensitizing a variety of tumor cells to DNA damaging agents.¹ Adavosertib also blocks Wee1 phosphorylation of E3 ubiquitin ligase SKP2 in human cells, ultimately preventing degradation of CDKs and further allowing cell cycle progression.² Stimulates anti-tumor immunity and enhances sensitivity to immune checkpoint blockade by activating ERV and the dsRNA pathway.³ Potentiates sensitivity of tumors to PARP inhibitors.⁴

- 1) Hirai *et al.* (2009) *Small-molecule inhibition of Wee1 kinase by MK-1775 selectively sensitizes p53-deficient tumor cells to DNA-damaging agents*; Mol. Cancer Ther. **8** 2992
- 2) Pan *et al.* (2021) *A novel WEE1 pathway for replication stress responses*; Nat. Plants **7** 209
- 3) Guo *et al.* (2022) *WEE1 inhibition induces anti-tumor immunity by activating ERV and the dsRNA pathway*; J. Exp. Med. **219** e20210789
- 4) Seo *et al.* (2021) *Inhibition of WEE1 Potentiates Sensitivity to PARP Inhibitor in Biliary Tract Cancer*; Cancer Res. Treat. Epub ahead of print

PHYSICAL DATA

Molecular Weight: 500.61
Molecular Formula: C₂₇H₃₂N₈O₂
Purity: >98% by HPLC
NMR: (Conforms)
Solubility: DMSO (70 mg/ml)
Physical Description: Yellow 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.

Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.