Print Date: Jul 25th 2022

Certificate of Analysis

www.tocris.com

Product Name: **Adavosertib** **Catalog No.: 7589** **Batch No.: 1**

CAS Number: 955365-80-7

IUPAC Name: 1,2-Dihydro-1-[6-(1-hydroxy-1-methylethyl)-2-pyridinyl]-6-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-2-(2-propen-1-yl)-3*H*-pyrazolo[3,4-*d*]pyrimidin-3-one

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{27}H_{32}N_8O_2.H_2O$

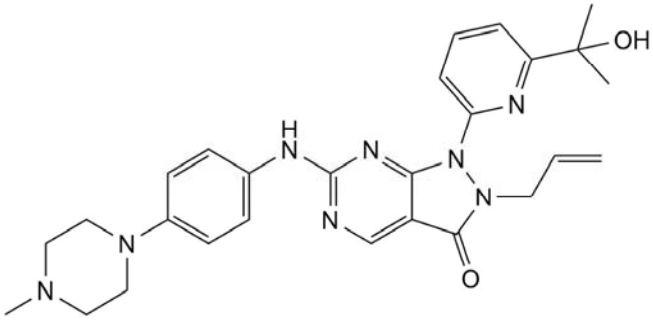
Batch Molecular Weight: 518.62

Physical Appearance: Yellow solid

Solubility: DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.5% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	62.53	6.61	21.61
Found	62.35	6.63	21.73

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Description:

Adavosertib is a potent and selective Wee1 inhibitor (IC_{50} = 5.2 nM). Blocks CDC2Y15 phosphorylation and Gemcitabine (Cat. No. 3259)-induced DNA damage checkpoint, leading to premature mitotic entry and apoptosis in p53-deficient tumor cell lines. Adavosertib synergizes with gemcitabine to achieve tumor regression in p53-deficient pancreatic cancer xenografts, with Olaparib (Cat. No. 7579) to inhibit SCLC xenograft tumor growth, and inhibits SCLC tumor growth in vivo. Adavosertib also potentiates the cytotoxic effects of Pemetrexed (Cat. No. 6185), Doxorubicin (Cat. No. 2252), Camptothecin (Cat. No. 1100) and Mitomycin C (Cat. No. 3258) in vi... Please see product specific page on www.tocris.com for full description.

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Minimum Purity: ≥98%

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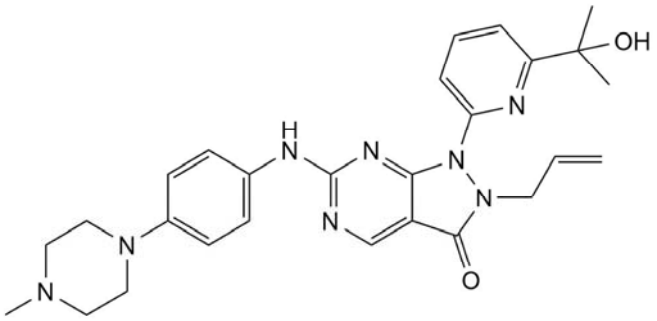

Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Lallo *et al* (2018) The combination of the PARP inhibitor olaparib and the WEE1 inhibitor AZD1775 as a new therapeutic option for small cell lung cancer. Clin.Cancer Res. ***24*** 5153. PMID: 29941481.

Rajeshkumar *et al* (2011) MK-1775, a potent Wee1 inhibitor, synergizes with gemcitabine to achieve tumor regressions, selectively in p53-deficient pancreatic cancer xenografts. Clin.Cancer Res. ***17*** 2799. PMID: 21389100.

Hirai *et al* (2010) MK-1775, a small molecule Wee1 inhibitor, enhances anti-tumor efficacy of various DNA-damaging agents, including 5-fluorouracil. Cancer Biol.Ther. ***9*** 514. PMID: 20107315.