

## Product Datasheet

# AZD3965

Catalog No. **BP-02311** · CAS **1448671-31-5** · Form **free base** · Physical state **solid** · Color **White to off-white** · Version **1.0** · Revision **2026-09-10**

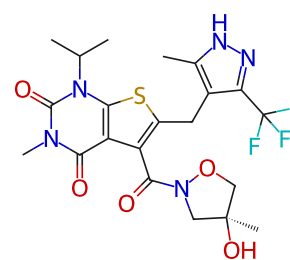
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|                                              |                                |
|----------------------------------------------|--------------------------------|
| Target<br><b>Monocarboxylate Transporter</b> | Research area<br><b>Cancer</b> |
|----------------------------------------------|--------------------------------|

Molecular formula **C<sub>21</sub>H<sub>24</sub>F<sub>3</sub>N<sub>5</sub>O<sub>5</sub>S**

Molecular weight **515.5060**

### STRUCTURE



## DESCRIPTION

AZD3965 is a selective MCT1 inhibitor with a  $K_i$  of 1.6 nM, showing 6-fold selectivity over MCT2.

## BIOLOGICAL ACTIVITY

### In Vitro

AZD3965 is designed to selectively inhibit Monocarboxylate transporter-1 (MCT1) and will therefore be expected to influence the movement of lactate into and out of cells[1]. AZD3965 treatment causes a 3.7 fold increase in intracellular lactate in hypoxic COR-L103 and 3.7 fold and 3.9 fold increases in normoxic and hypoxic NCI-H1048 cells respectively. In all other cases a <1.9 fold increase is observed. These data are consistent with AZD3965 blocking lactate transport in cells where AZD3965 also reduces cell number and is consistent with AZD3965 acting via inhibition of MCT1. When MCT1 is overexpressed the EC50 of NCI-H1048 is increased from 0.14 nM to 10.5 nM in NCI-H1048 cells. This is consistent with AZD3965 acting via MCT1 inhibition.

### In Vivo

COR-L103 tumor bearing mice are treated with 100 mg/kg AZD3965 or vehicle BID for 21 days and the tumor volume monitored. Pharmacokinetic analysis demonstrates that 100 mg/kg AZD3965 BID results in concentrations of free AZD3965 predicted to inhibit lactate transport. AZD3965 treatment significantly reduces the growth of COR-L103 tumors, although tumor regression is not seen, consistent with AZD3965 only targeting the hypoxic fraction of the tumor.

## SOLUBILITY

Soluble in DMSO

## REFERENCES

[1]. Bola BM, et al. Inhibition of monocarboxylate transporter-1 (MCT1) by AZD3965 enhances radiosensitivity by reducing lactate transport. Mol Cancer Ther. 2014 Dec;13(12):2805-16.

[2]. Polanski R, et al. Activity of the monocarboxylate transporter 1 inhibitor AZD3965 in small cell lung cancer. Clin Cancer Res. 2014 Feb 15;20(4):926-37.

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