

Product Datasheet

AZD6738

Catalog No. **BP-02321** · CAS **1352226-88-0** · Form **free base** · Physical state **other** · Version **1.0** · Revision **2026-09-10**

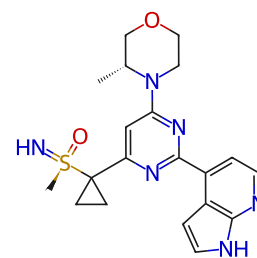
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Target ATM/ATR	Research area Cancer
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Molecular formula **C₂₀H₂₄N₆O₂S**

Molecular weight **412.5090**

STRUCTURE



DESCRIPTION

AZD6738 (Ceralasertib) is an orally bioavailable inhibitor of the serine/threonine protein kinase ataxia telangiectasia mutated (ATM) and Rad3-related (ATR; IC₅₀ = 1 nM).

BIOLOGICAL ACTIVITY

In Vitro

Ceralasertib (AZD6738) is a potent inhibitor of ATR kinase activity with an IC₅₀ of 0.001 μM against the isolated enzyme and 0.074 μM against ATR kinase-dependent CHK1 phosphorylation in cells. Ceralasertib (AZD6738) induces cell death and senescence in non-small cell lung cancer (NSCLC) cell lines. Ceralasertib (AZD6738) impairs viability of four Kras mutant cell lines: H23, H460, A549, and H358. , with the lowest GI₅₀ and greatest maximal inhibition in H460 and H23 cells (1.05 μM, 88.0% and 2.38 μM, 86.2%, respectively). Ceralasertib (AZD6738) potentiates the cytotoxicity of CDDP and NSC 613327 in NSCLC cell lines with intact ATM kinase signaling, and potently synergizes with CDDP in ATM-deficient NSCLC cells[1]. Ceralasertib (AZD6738) inhibits human breast cancer cell lines with IC₅₀ values less than 1 μM using MTT assay. Ceralasertib (AZD6738) induces cell cycle arrest and apoptosis. It downregulates DNA damage response molecules and cell proliferative signaling molecules.

In Vivo

Daily administration of Ceralasertib (AZD6738) and ATR kinase inhibition for 14 consecutive days is tolerated in mice and enhances the therapeutic efficacy of CDDP in xenograft models. Remarkably, the combination of CDDP and Ceralasertib (AZD6738) resolves ATM-deficient lung cancer xenografts.

SOLUBILITY

Soluble in DMSO

REFERENCES

[1]. Vendetti FP, et al. The orally active and bioavailable ATR kinase inhibitor AZD6738 potentiates the anti-tumor effects of CDDP to resolve ATM-deficient non-small cell lung cancer in vivo.

[2]. Kim HJ, et al. Anti-tumor activity of the ATR inhibitor AZD6738 in HER2 positive breast cancer cells. Int J Cancer. 2017 Jan 1;140(1):109-119.

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