

Product Data Sheet

Product Name: AZ1495
Cat. No.: GC33054

Chemical Properties

Cas. No. 2196204-23-4

SMILES C1(C(C2CCOCC2)=CN3)=C3N=CN=C1N[C@@H]4CC[C@H](N5CCOCC5)CC4

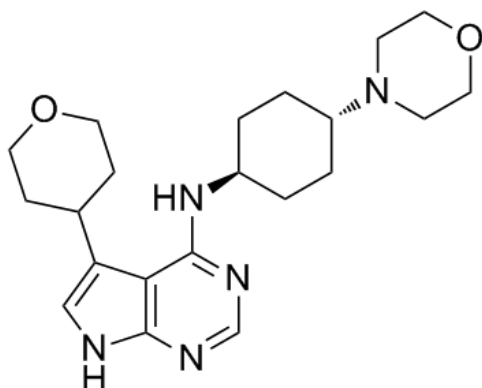
Formula $C_{21}H_{31}N_5O_2$ M.Wt 385.5

Solubility DMSO : 10 mg/mL (25.94 mM) Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



Protocol

Cell experiment [1]:

Cell lines Human corneal epithelial cells (HCECs)

Caution: Product has not been fully validated for medical applications. For research use only.

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Preparation Method HCECs were cultured in Endothelial Cell Medium (ECM) supplemented with 5% FBS and AZ1495 (1 μ M).

Reaction
Conditions 1 μ M; 24 hours.

Applications AZ1495 enhanced the proliferative activity (cell viability) of HCECs under hyperosmolarity-induced stress. AZ1495 significantly inhibited the hyperosmotic saline-induced activation of the IRAK1-JNK1 pathway and the expression of pro-inflammatory cytokines (e.g., MMP-9, TNF- α , IL-1 β , Caspase-3, IL-6, IFN- γ) at both mRNA and protein levels.

Animal experiment [2]:

Animal models Female CB.17 SCID mice bearing OCI-LY10 (ABC-DLBCL) tumor xenografts.

Preparation Method In the OCI-LY10 xenograft mouse model, AZ1495 (12.5mg/kg) administered orally once daily for 51days.

Dosage form 12.5mg/kg; p.o.; Daily oral administration.

Applications AZ1495 led to a 60% tumor growth inhibition. When administered in combination with the BTK inhibitor Ibrutinib (12mg/kg; p.o.), the treatment led to tumor regression, demonstrating a synergistic antitumor effect in the mutant MYD88L265P DLBCL model.

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References:

- [1] Liu Y, Jiang Y, Song C, et al. The role of miR-146a/IRAK1/JNK1 pathway in mediating the effects of Yiqi Congming decoction on dry eye: A mechanistic study in rat models. J Ethnopharmacol. 2025 May 12;347:119698.
- [2] Scott JS, Degorce SL, Anjum R, et al. Discovery and Optimization of Pyrrolopyrimidine Inhibitors of Interleukin-1 Receptor Associated Kinase 4 (IRAK4) for the Treatment of Mutant MYD88L265P Diffuse Large B-Cell Lymphoma. J Med Chem. 2017 Dec 28;60(24):10071-10091.

Background

AZ1495 is a novel, orally active interleukin-1 receptor-associated kinase 4 (IRAK4) inhibitor. AZ1495 inhibits the activity of both IRAK4 ($IC_{50}=5nM$) and IRAK1 ($IC_{50}=23nM$). AZ1495 can be used in research related to diffuse large B-cell lymphoma (DLBCL)^[1-2].

In vitro, AZ1495 (1 μM) was used to treat human corneal epithelial cells (HCECs) under hypertonic conditions for 24 hours. AZ1495 significantly inhibited the expression of the IRAK1 protein and its downstream inflammatory and apoptotic factors, and enhanced cell viability^[1]. AZ1495 (1nM-100 μM) was used to treat OCI-LY10 cells for 3 days, effectively inhibiting the activation of the NF- κB pathway (e.g., by reducing p-I $\kappa B\alpha$ levels) and inducing cell death^[2].

In vivo, in an OCI-LY10 xenograft mouse model, AZ1495 (12.5mg/kg; administered orally once daily; for 51 consecutive days) alone was shown to inhibit tumor growth. When AZ1495 was combined with Ibrutinib (12mg/kg; administered orally once daily), AZ1495 led to tumor regression^[2].

References:

- [1] Liu Y, Jiang Y, Song C, et al. The role of miR-146a/IRAK1/JNK1 pathway in mediating the effects of Yiqi Congming decoction on dry eye: A mechanistic study in rat models. J Ethnopharmacol. 2025 May 12;347:119698.
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