Product Datasheet

CPI-444

Catalog No. **BP-01850** · CAS **1202402-40-1** · Form **free base** · Physical state **solid** · Color **White to light yellow** · Version **1.0** · Revision **2026-09-08**

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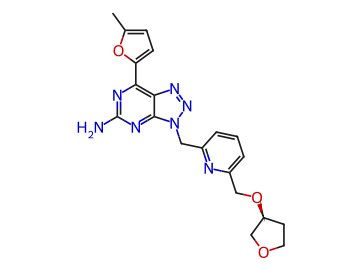
Target	Research area
Adenosine Receptor	**Cancer**

Molecular formula	$C_{20}H_{21}N_7O_3$
Molecular weight	**407.4258**

STRUCTURE



DESCRIPTION

Ciforadenant (CPI-444) is a potent, orally active and selective adenosine A2A receptor (A2AR) antagonist, which induces antitumor responses.

BIOLOGICAL ACTIVITY

In Vitro

Ciforadenant is a potent, oral, selective A2AR antagonist. CD8+ T cell depletion abrogates the efficacy of Ciforadenant treatment as a single agent as well as in combination with anti-PD-L1, demonstrating a role for CD8+ T cells in mediating primary and secondary immune responses. Anti-tumor efficacy of Ciforadenant±anti-PD-L1 is associated with increased CD8+ cell infiltration and activation in MC38 tumor tissues, and a corresponding rise in PD-1 expression on CD8+ T cells in the spleen. Additionally, levels of immune checkpoints are modulated by treatment with Ciforadenant, including GITR, OX40, and LAG3 on tumor infiltrating lymphocytes and circulating T cells, suggesting a broad role for adenosine mediated immunosuppression.

In Vivo

Daily treatment of the syngeneic mouse model MC38 with Ciforadenant (1, 10, 100 mg/kg) leads to dose-dependent inhibition of tumor growth, leading to tumor elimination in ~30% of treated mice. Combining Ciforadenant (100 mg/kg, qd, 14 days) with anti-PD-L1 (200 μg, 3qw, 4 doses) treatment in MC38 models synergistically inhibits tumor growth and eliminates tumors in 90% of treated mice. When cured mice are later re-challenged with MC38 cells, tumor growth is rejected in 100% of challenged mice, indicating that Ciforadenant induces systemic anti-tumor immune memory.

SOLUBILITY

Soluble in DMSO

REFERENCES

[1]. Stephen Willingham, et al. Abstract PR04: CPI-444: A potent and selective inhibitor of A2AR induces antitumor responses alone and in combination with anti-PD-L1 in preclinical and clinical studies.Cancer Immunoly Research. September 25-28, 2016.

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