

Product Datasheet

E-7046

Catalog No. **BP-01877** · CAS **1369489-71-3** · Form **free base** · Physical state **solid** · Color **White to off-white** · Version **1.0** · Revision **2026-09-07**

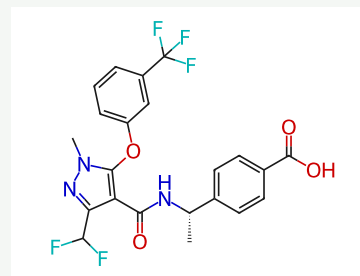
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Target Prostaglandin Receptor	Research area Endocrinology; Cancer
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Molecular formula **C₂₂H₁₈F₅N₃O₄**

Molecular weight **483.3880**

STRUCTURE



DESCRIPTION

Palupiprant (E7046) is an orally bioavailable and specific EP4 antagonist, with IC₅₀ of 13.5 nM and K_i of 23.14 nM. Palupiprant exhibits anti-tumor activities.

BIOLOGICAL ACTIVITY

In Vitro

Palupiprant (E7046) reverses the immunosuppressive effects of PGE₂ on activation and differentiation of human myeloid cells through selective EP4 antagonism.

In Vivo

In the CT-26 tumor model, the Palupiprant/RT combination causes the anti-tumor memory response of 9 animals. In the 4T1 model, the combination of Palupiprant and RT also produces significant better tumor growth inhibition activity compared with each treatment alone. The combination significantly improves survival by inhibiting the subsequent spontaneous lung metastasis of 4T1 tumors. Palupiprant (150 mg/kg) inhibits the growth of multiple syngeneic tumor models. Blockade of EP4 signaling promotes anti-tumor DC differentiation and slows tumor growth in mice. Palupiprant treatment reduces the growth or even rejected established tumors in vivo in a manner dependent on both myeloid and CD8C T cells. Furthermore, co-administration of Palupiprant and E7777, an IL-2-diphtheria toxin fusion protein that preferentially kills Tregs, synergistically disrupts the myeloid and Treg immunosuppressive networks, resulting in effective and durable anti-tumor immune responses in mouse tumor models.

SOLUBILITY

Soluble in DMSO

REFERENCES

[1]. X. Bao, et al. Combination of a Novel EP4 Antagonist E7046 and Radiation Therapy Promotes Anti-tumor Immune Response and Tumor Rejection in Preclinical Tumor Models. International Journal of Radiation Oncology Biology Physics

[2]. Diana I. Albu, et al. EP4 Antagonism by E7046 diminishes Myeloid immunosuppression and synergizes with Treg-reducing IL-2-Diphtheria toxin fusion protein in restoring anti-tumor immunity. OncoImmunology.

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