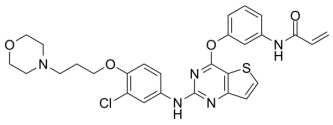
Thi-DPPY

Cat. No.:	HY-147742
CAS No.:	2307699-34-7
Molecular Formula:	$C_{28}H_{28}ClN_5O_4S$
Molecular Weight:	566.07
Target:	JAK
Pathway:	Epigenetics; JAK/STAT Signaling; Stem Cell/Wnt
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Thi-DPPY (compound 8e) is a potent and orally active JAK3 inhibitor with IC_{50} values of 62.4, 1.38 nM for BTK, JAK, respectively. Thi-DPPY shows anti-proliferative activity against HBE cells. Thi-DPPY shows anti-inflammatory activity in vivo. Thi-DPPY has the potential for the research of idiopathic pulmonary fibrosis (IPF)[1].

IC_{50} & Target	JAK	BTK
	1.38 nM (IC_{50})	62.4 nM (IC_{50})

In Vitro

DPPY (compound 8e) shows anti-proliferative activity against HBE (human bronchial epithelia) cells with an IC_{50} of 39.0 μM [1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

DPPY (30, 60 mg/kg; i.g., once daily for 14 days) shows anti-IPF agents on the lung morphology and lung coefficient in mouse model[1].

DPPY (30, 60 mg/kg) significantly decreases the expression of IL-6, IL-17A, TNF-α and MDA in lung tissue in a dose dependent manner[1].

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Animal Model:	5-6 week old, 20-25 g, C57BL mice (BLM-induced pulmonary inflammation and pulmonary fibrosis model)[1]
Dosage:	30, 60 mg/kg
Administration:	I.g.; once daily for 14 days
Result:	Attenuated the pulmonary morphology changes and reduced the collagen disposition induced by BLM in mouse lung.

REFERENCES

[1]. Zhu Y, et al. Synthesis and biological activity of thieno[3,2-d]pyrimidines as potent JAK3 inhibitors for the treatment of idiopathic pulmonary fibrosis. Bioorg Med Chem. 2020 Jan 15;28(2):115254.

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

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