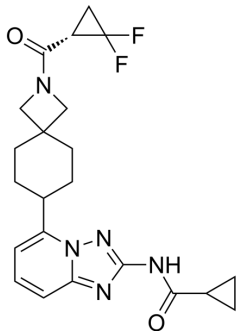
TUL01101

Cat. No.:	HY-152080
CAS No.:	2411222-97-2
Molecular Formula:	$C_{22}H_{25}F_2N_5O_2$
Molecular Weight:	429.46
Target:	JAK
Pathway:	Epigenetics; JAK/STAT Signaling; Protein Tyrosine Kinase/RTK; Stem Cell/Wnt
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	TUL01101 is a potent, selective and orally active JAK1 inhibitor, with an IC_{50}s of 3, 37, 1517 and 36 nM for JAK1, JAK2, JAK3, and TYK2, respectively. TUL01101 can be used for the research of rheumatoid arthritis[1].

IC_{50} & Target	JAK1	JAK2	JAK3	Tyk2
	3 nM (IC_{50})	37 nM (IC_{50})	1517 nM (IC_{50})	36 nM (IC_{50})

In Vitro

TUL01101 (pretreatment for 1 h) inhibits cytokine-induced pSTAT in human whole blood assay[1].

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

In Vivo

TUL01101 (1-30 mg/kg; p.o. twice daily for 14 d) inhibits rheumatoid arthritis in the rat adjuvant-induced arthritis (AIA) model[1].

TUL01101 (15 mg/kg; p.o. twice daily for 14 d) inhibits rheumatoid arthritis in collagen-induced arthritis models[1].

TUL01101 (15 mg/kg; p.o.) exhibits $T_{1/2}$ of 2.01 h, C_{max} of 5105 nM, and oral bioavailability of 38.1% in mice[1].

TUL01101 (10 mg/kg; p.o.) exhibits $T_{1/2}$ of 3.06 h, C_{max} of 4965 nM, and oral bioavailability of 121% in rats[1].

TUL01101 (5 mg/kg; p.o.) exhibits $T_{1/2}$ of 4.49 h, C_{max} of 2750 nM, and oral bioavailability of 106.5% in dogs[1].

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

Animal Model:	Rat adjuvant-induced arthritis (AIA) model[1]
Dosage:	1, 3, 10, 30 mg/kg
Administration:	Orally administered twice daily for 14 days
Result:	Decreased the incidence in a dose-dependent manner.

REFERENCES

[1]. Zhou S, et, al. Identification of TUL01101: A Novel Potent and Selective JAK1 Inhibitor for the Treatment of Rheumatoid Arthritis. J Med Chem. 2022 Dec 22;65(24):16716-16740.

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

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