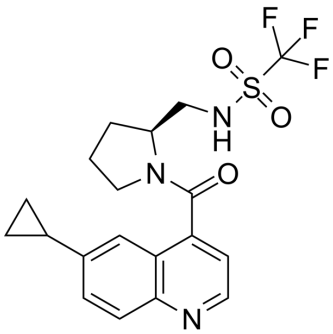
URAT1 inhibitor 10

Cat. No.:	HY-163431
CAS No.:	3012586-38-5
Molecular Formula:	$C_{19}H_{20}F_3N_3O_3S$
Molecular Weight:	427.44
Target:	URAT1
Pathway:	Membrane Transporter/Ion Channel
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

URAT1 inhibitor 10 (Compound 23a) is a URAT1 inhibitor. URAT1 inhibitor 10 has oral efficacy and low cytotoxicity. URAT1 inhibitor 10 has high selectivity for OAT1 [1].

In Vitro

URAT1 inhibitor 10 shows low cytotoxicity (IC_{50} > 64 μg/mL) in HepG2 cells[1].
URAT1 inhibitor 10 (5 μM; 30 min) inhibits OAT1 activity in MDCK-hOAT cells (IC_{50} =9.17 μM)[1].
URAT1 inhibitor 10 (24 h) shows moderate inhibition of IL-6 (IR = 25.6%) in RAW264.7 cells, which may alleviate symptoms associated with MSU crystal-mediated inflammatory cytokines[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

URAT1 inhibitor 10 (10 mg/kg; p.o. once a day for 7 days) shows a significant reduction in the activity of serum uric acid (SUA) in a mouse model of hyperuricemia induced by potassium oxybate with a reduction of 53.9%[1].
URAT1 inhibitor 10 (50 mg/kg; p.o.) has a favorable pharmacokinetic profile[1].

Pharmacokinetic Analysis in URAT1 inhibitor 10 Model[1]

[1]

Route	Dose (mg/kg)	$t_{1/2}$ (h)	t_{max} (h)	C_{max} (ng/mL)	$AUC_{(0-t)}$ (ng·h/mL)	$AUC_{(0-\infty)}$ (ng·h/mL)	$MRT_{(0-\infty)}$ (h)
p.o.	50	1.9	0.25	8187	10050	10255	1.43

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Animal Model:	hyperuricemia mice [1]
Dosage:	10 mg/kg Once a day for seven days
Administration:	p.o.
Result:	Exhibited significant serum uric acid-lowering activity. The serum uric acid (SUA) levels decreased to 424 μM, achieving a reduction ratio of 53.9%. This performance was

	comparable to that of the positive control, Lesinurad (HY-15258), which also demonstrated significant SUA-lowering effects at the same dose.

REFERENCES

[1]. Li S et al. Proline-derived quinoline formamide compounds as human urate transporter 1 inhibitors with potent uric acid-lowering activities. Eur J Med Chem. 2024 Apr 5;269:116327

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