# URAT1 inhibitor 4

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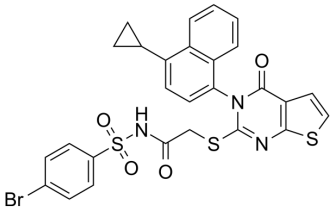
| **Cat. No.:** | HY-152033 |
| **CAS No.:** | 2700292-02-8 |
| **Molecular Formula:** | $C_{27}H_{20}BrN_3O_4S_3$ |
| **Molecular Weight:** | 626.56 |
| **Target:** | URAT1; GLUT |
| **Pathway:** | Membrane Transporter/Ion Channel |
| **Storage:** | Please store the product under the recommended conditions in the Certificate of Analysis. |



## BIOLOGICAL ACTIVITY

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| **Description** | URAT1 inhibitor 4, a Lesinurad derivative, is a potent and orally active URAT1 inhibitor with an $IC_{50}$ of 7.56 μM. URAT1 inhibitor 4 has higher in vivo urate-lowering efficacy than Lesinurad (HY-15258)[1]. |
| **$IC_{50}$ & Target** | $IC_{50}$: 7.56 ± 0.52 μM (URAT1), 55.96 ± 10.38 μM (GLUT9)[1] |
| **In Vitro** | URAT1 inhibitor 4 (compound 10) inhibits URAT1 and GLUT9 with $IC_{50}$s of 7.56 ± 0.52 μM and 55.96 ± 10.38 μM[1].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |
| **In Vivo** | URAT1 inhibitor 4 (2 mg/kg; p.o.; single dosage) decreases serum uric acid level in acute hyperuricemia model mice[1].<br>URAT1 inhibitor 4 (1000 mg/kg; i.g.; single dosage) exhibits higher survival rate than Lesinurad in mice acute toxicity assessment[1].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

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| Animal Model: | Kunming mice (acute hyperuricemia model)[1] |
| Dosage: | 2 mg/kg |
| Administration: | p.o.; single dosage |
| Result: | Decreased serum uric acid with an decrease ratio of 73.29%. |

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| Animal Model: | Kunming mice[1] |
| Dosage: | 1000 mg/kg |
| Administration: | i.g.; single dosage |
| Result: | Survival rate was 100% after 7 days, while Lesinurad were 40% (male) and 20% (female). |

## REFERENCES

[1]. Zhang J, et al. Design, synthesis and activity evaluation of novel lesinurad analogues containing thienopyrimidinone or pyridine substructure as human urate transporter 1 inhibitors. Eur J Med Chem. 2022 Dec 15;244:114816.



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