URAT1

Urate transporter 1; SLC22A12

URAT1, a member of the OAT (organic anion transporter) family was first cloned from the human kidney, where it is localized to the apical (brush border) membrane of renal proximal tubular cells. URAT1 mediates the reabsorption of uric acid, thereby regulating blood uric acid concentrations. Impairment in URAT1 activity, either due to polymorphisms, or drug-drug interactions, can have toxicological consequences. In the kidney, URAT1 is distributed along the renal tubular cell membrane and involved in reabsorption and excretion of uric acid, organic acids, drugs and their metabolites. Uric acid is taken up by OAT1 and OAT3 from the blood and reabsorbed into renal tubular cells via URAT1, in exchange for dicarboxylic acid. URAT1, along with OAT4 mediates uptake of uric acid from the renal tubule into renal tubular cells in exchange for organic anions such as lactic acid and nicotinic acid. This exchange is electroneutral and can be trans-stimulated by Cl^- gradients and gradients of lactate transported by the sodium-monocarboxylate transporter. In the salivary glands, URAT1 is distributed along the entire surface, including the ductal and acinar cells, suggesting a role in the transport of organic acids and uric acid in the whole salivary gland.

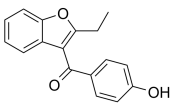
URAT1 Inhibitors

Benzarone

(Fragivix)

Cat. No.: HY-W011711

Benzarone (Fragivix) is a potent **human uric acid transporter 1 (hURAT1)** inhibitor, with an IC_{50} of 2.8 μM in oocyte. Benzarone could lower uric acid serum levels.

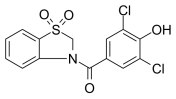


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Dotinurad

Cat. No.: HY-109031

Dotinurad is a potent and selective urate reabsorption inhibitor. Dotinurad inhibits urate transporter 1 (**URAT1**) with an IC_{50} value of 37.2 nM. Dotinurad acts as a uricosuric agent.

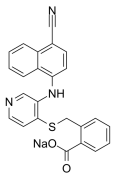


Purity: 98.56%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

KPH2f

Cat. No.: HY-144305

KPH2f is a safe, orally active, and effective dual **URAT1/GLUT9** inhibitor with IC_{50}s of 0.24 μM and 9.37 μM for URAT1 and GLUT9, respectively. KPH2f shows little effects on OAT1 and ABCG2 (IC_{50}=32.14 and 26.74 μM).



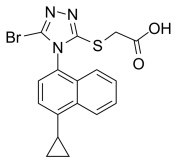
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Lesinurad

(RDEA594)

Cat. No.: HY-15258

Lesinurad is a **URAT1** and **OAT** inhibitor, is determined to be a substrate for the kidney transporters **OAT1** and **OAT3** with K_m values of 0.85 and 2 μM, respectively.



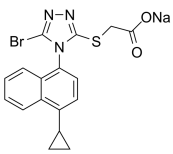
Purity: 99.93%
Clinical Data: Launched
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Lesinurad sodium

(RDEA-594 sodium)

Cat. No.: HY-15258A

Lesinurad sodium is a **URAT1** and **OAT** inhibitor, is determined to be a substrate for the kidney transporters **OAT1** and **OAT3** with K_m values of 0.85 and 2 μM, respectively.

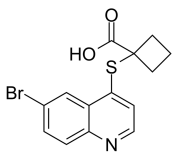


Purity: 99.96%
Clinical Data: Launched
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg, 200 mg

Ruzinurad

Cat. No.: HY-W052011

Ruzinurad is a highly selective **URATl** inhibitor (WO2020088641, compound I). Ruzinurad can be used in the study of hyperuricemia.

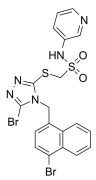


Purity: 99.05%
Clinical Data: No Development Reported
Size: 50 mg, 100 mg, 500 mg

URAT1 inhibitor 1

Cat. No.: HY-114309

URAT1 inhibitor 1 (1g) is a **uric acid transporter 1 (URAT1)** inhibitor, with an IC_{50} of 32 nM. URAT1 inhibitor 1 has potential to treat hyperuricemia associated with gout.

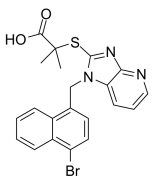


Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

URAT1 inhibitor 2

Cat. No.: HY-143906

URAT1 inhibitor 2 is an orally active and potent **URAT1** and **CYP isozyme** inhibitor, with IC_{50} values of 1.36 μM, 16.97 μM, 5.22 μM for URAT1-mediated ^{14}C-UA uptake, CYP1A2 and CYP2C9, respectively.



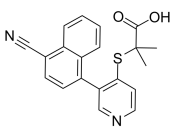
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Verinurad

(RDEA3170)

Cat. No.: HY-16733

Verinurad (RDEA3170) is a highly potent and specific **URAT1** inhibitor with an IC_{50} of 25 nM.



Purity: 99.18%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

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