

Febuxostat

Catalog No: tcsc0403



Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg



Specifications

CAS No:

144060-53-7

Formula:

$C_{16}H_{16}N_2O_3S$

Pathway:

Metabolic Enzyme/Protease

Target:

Xanthine Oxidase

Purity / Grade:

>98%

Solubility:

DMSO : 50 mg/mL (158.04 mM; Need ultrasonic)

Alternative Names:

TEI 6720;TMX 67

Observed Molecular Weight:

316.37

Product Description

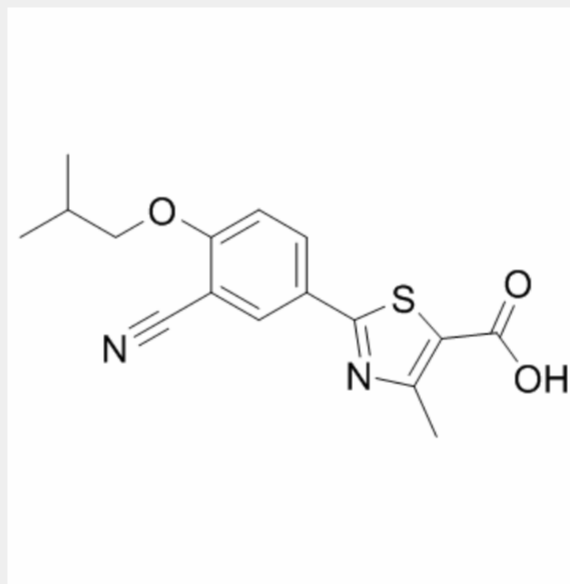
Febuxostat (TEI 6720; TMX 67) is selective xanthine oxidase inhibitor with K_i of 0.6 nM.

IC₅₀ value: 0.6 nM (K_i) [1]

Target: xanthine oxidase

in vitro: Febuxostat displays potent mixed-type inhibition of the activity of purified bovine milk xanthine oxidase, with K_i and K_i' values of 0.6 nM and 3.1 nM respectively, indicating inhibition of both the oxidized and reduced forms of xanthine oxidase [1].

in vivo: Febuxostat (5–6 mg/kg/day) combined with fructose significantly lowers blood pressure, UA, triglycerides, and insulin in rats compared with fructose alone. Febuxostat (5–6 mg/kg/day) combined with fructose also reduces glomerular pressure, renal vasoconstriction, and afferent arteriolar area in rats compared with fructose alone [2]. Febuxostat prevents hyperuricemia in 5/6 nephrectomy (5/6 Nx)+oxonic acid (OA)+Febuxostat(Fx) rats and ameliorates proteinuria, preserves renal function and prevents glomerular hypertension in both 5/6 nephrectomy (5/6 Nx)+vehicle (V)+Febuxostat(Fx) and 5/6 nephrectomy (5/6 Nx)+oxonic acid (OA)+Febuxostat(Fx) groups [3]. Febuxostat (5 mg/kg/d by gavage for 8 days) treatment after transverse aortic constriction (TAC) attenuates the TAC-induced left ventricular (LV) hypertrophy and dysfunction. Febuxostat blunts the TAC-induced increases in nitrotyrosine (indicating reduced myocardial oxidative stress), p-Erk(Thr202/Tyr204), and p-mTOR(Ser2488), with no effect on total Erk or total mTOR [4].



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