



LKT Laboratories, Inc.

Zileuton

Phone: 888-558-5227
651-644-8424
Fax: 888-558-7329
Email: getinfo@lktlabs.com
Web: lktlabs.com

Product Information

Product ID Z3444

CAS No. 111406-87-2

Chemical Name 1-[1-(1-benzothiophen-2-yl)ethyl]-1-hydroxyurea

Synonym

Formula $C_{11}H_{12}N_2O_2S$

Formula Wt. 236.29

Melting Point 144.2-145.2 °C

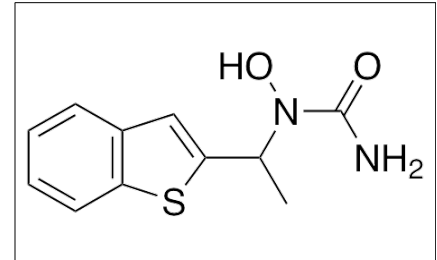
Purity ≥98%

Solubility >0.5 mg/ml in DMSO:PBS
(pH 7.2) (1:1)

Store Temp Ambient

Ship Temp Ambient

Description Zileuton is an inhibitor of 5-lipoxygenase that exhibits anti-inflammatory, anti-asthma, anti-allergic, neuroprotective, cognition enhancing, anti-metastatic, and anticancer chemotherapeutic activities. In vitro and in vivo, zileuton inhibits release of arachidonic acid, inhibiting production of inflammatory mediators such as prostaglandins. Zileuton inhibits hyperplasia, hypertrophy, and remodeling of the extracellular matrix in animal models of chronic asthma and is thought to act through a PI3K/Akt-mediated pathway. In an animal model of cerebral ischemia/reperfusion using middle cerebral artery occlusion, zileuton inhibited increases in caspases 1 and 3, preventing neuronal apoptosis. Zileuton also displays some benefit in animal models of Alzheimer's disease, decreasing amyloid-B (AB) levels and deposition, downregulating signaling by γ -secretase and phosphorylation of tau protein, and improving memory deficits.



Bulk quantities available upon request

Product ID	Size
Z3444	100 mg
Z3444	250 mg
Z3444	1 g

References Meng Z, Cao R, Yang Z, et al. Inhibitor of 5-Lipoxygenase, Zileuton, Suppresses Prostate Cancer Metastasis by Upregulating E-cadherin and Paxillin. *Urology*. 2013 Dec;82(6):1452.e7-1452.e14. PMID: 24295266.

Chen WJ, Liaw SF, Lin CC, et al. Effects of zileuton on airway smooth muscle remodeling after repeated allergen challenge in brown norway rats. *Respiration*. 2013;86(5):421-9. PMID: 24021192.

Shi SS, Yang WZ, Tu XK, et al. 5-Lipoxygenase inhibitor zileuton inhibits neuronal apoptosis following focal cerebral ischemia. *Inflammation*. 2013 Dec;36(6):1209-17. PMID: 23695166

Chu J, Li JG, Praticò D. Zileuton improves memory deficits, amyloid and tau pathology in a mouse model of Alzheimer's disease with plaques and tangles. *PLoS One*. 2013 Aug 7;8(8):e70991. PMID: 23951061.

Chu J, Praticò D. 5-Lipoxygenase pharmacological blockade decreases tau phosphorylation in vivo: involvement of the cyclin-dependent kinase-5. *Neurobiol Aging*. 2013 Jun;34(6):1549-54. PMID: 23332172.

Rossi A, Pergola C, Koeberle A, et al. The 5-lipoxygenase inhibitor, zileuton, suppresses prostaglandin biosynthesis by inhibition of arachidonic acid release in macrophages. *Br J Pharmacol*. 2010 Oct;161(3):555-70. PMID: 20880396.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.