

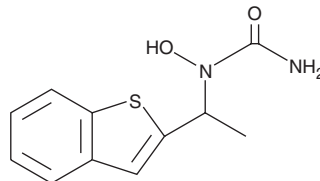
# PRODUCT INFORMATION



## Zileuton

Item No. 10006967

**CAS Registry No.:** 111406-87-2  
**Formal Name:** N-(1-benzo[b]thien-2-ylethyl)-N-hydroxy-urea  
**Synonym:** A 64077  
**MF:** C<sub>11</sub>H<sub>12</sub>N<sub>2</sub>O<sub>2</sub>S  
**FW:** 236.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 203, 230, 260, 299 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Zileuton is supplied as a crystalline solid. A stock solution may be made by dissolving the zileuton in an organic solvent purged with an inert gas. Zileuton is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of zileuton in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Zileuton is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, zileuton should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Zileuton has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Zileuton is a reversible 5-lipoxygenase (5-LO) inhibitor.<sup>1</sup> It inhibits 5-LO activity in rat basophilic leukemia-1 (RBL-1) cell supernatant with an IC<sub>50</sub> value of 0.5 μM. Zileuton inhibits leukotriene B<sub>4</sub> (LTB<sub>4</sub>; Item No. 20110) production induced by the calcium ionophore A23187 (Item No. 11016) in purified human peripheral blood polymorphonuclear leukocytes (PMNLs; IC<sub>50</sub> = 0.6 μM). Zileuton (10 mg/kg, p.o.) prevents antigen challenge-induced increases in specific lung resistance in a sheep model of asthma at 4 to 8 hours post-challenge following administration 2 hours pre-challenge.<sup>2</sup> Formulations containing zileuton have been used in the prophylaxis and chronic treatment of asthma.

### References

1. Carter, G.W., Young, P.R., Albert, D.H., et al. 5-Lipoxygenase inhibitory activity of zileuton. *J. Pharmacol. Exp. Ther.* **256**(3), 929-937 (1991).
2. Abraham, W.M., Ahmed, A., Cortes, A., et al. The 5-lipoxygenase inhibitor zileuton blocks antigen-induced late airway responses, inflammation and airway hyperresponsiveness in allergic sheep. *Eur. J. Pharmacol.* **217**(2-3), 119-126 (1992).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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