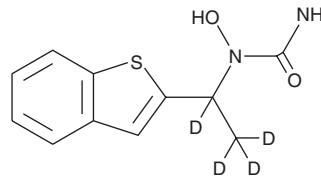


# PRODUCT INFORMATION



## Zileuton-d<sub>4</sub> Item No. 26761

**CAS Registry No.:** 1189878-76-9  
**Formal Name:** N-(1-benzo[b]thien-2-ylethyl-d<sub>4</sub>)-N-hydroxy-urea  
**MF:** C<sub>11</sub>H<sub>8</sub>D<sub>4</sub>N<sub>2</sub>O<sub>2</sub>S  
**FW:** 240.3  
**Chemical Purity:** ≥95% (Zileuton)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>4</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A 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-d<sub>4</sub> is intended for use as an internal standard for the quantification of zileuton (Item No. 10006967) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Zileuton-d<sub>4</sub> is supplied as a solid. A stock solution may be made by dissolving the zileuton-d<sub>4</sub> in the solvent of choice, which should be purged with an inert gas. Zileuton-d<sub>4</sub> is slightly soluble in DMSO and very slightly soluble in methanol.

### Description

Zileuton-d<sub>4</sub> is intended for use as an internal standard for the quantification of zileuton (Item No. 10006967) by GC- or LC-MS. 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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