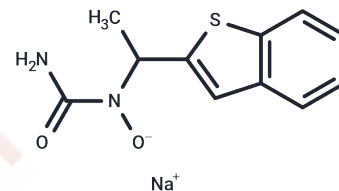


## Zileuton sodium

## Chemical Properties

CAS No. :	118569-21-4
Formula:	C <sub>11</sub> H <sub>11</sub> N <sub>2</sub> NaO <sub>2</sub> S
Molecular Weight:	258.27
Storage:	Keep away from moisture Powder: -20°C for 3 years   In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



## Biological Description

Description	Zileuton sodium is a selective and reversible 5-lipoxygenase (5-LOX) inhibitor that suppresses LTB <sub>4</sub> synthesis. It significantly reduces arachidonic acid-induced ear edema in mice (ED <sub>50</sub> = 31 mg/kg) and is suitable for inflammation research.
Targets(IC <sub>50</sub> )	LTR,Lipoxygenase
In vitro	Zileuton sodium inhibits 5-hydroxydocosahexaenoic acid synthesis in rat basophilic leukemia cell 20,000 x g supernatant and rat polymorphonuclear leukocytes (PMNL), with IC <sub>50</sub> = 0.5/0.3 mM. It inhibits leukotriene (LT) B <sub>4</sub> synthesis in rat PMNL (IC <sub>50</sub> = 0.4 μM), human PMNL (IC <sub>50</sub> = 0.4 μM), and human whole blood (IC <sub>50</sub> = 0.9 μM). Inhibition of human PMNL LTB <sub>4</sub> biosynthesis is readily reversed by simple washing procedures [1].
In vivo	Zileuton sodium (1200 mg/kg) inhibited polyp formation in the colon and small intestine of APCΔ468 rats. Zileuton sodium treatment suppressed proliferation rates of non-epithelial cells within polyps and increased apoptosis within polyps, contributing to reduced polyp incidence in the small intestine and colon of Zileuton sodium-fed APCΔ468 mice [4].

## Solubility Information

Solubility	DMSO: 80 mg/mL (309.75 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.8719 mL	19.3596 mL	38.7192 mL
5 mM	0.7744 mL	3.8719 mL	7.7438 mL
10 mM	0.3872 mL	1.936 mL	3.8719 mL
50 mM	0.0774 mL	0.3872 mL	0.7744 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

- Carter GW, et al. 5-lipoxygenase inhibitory activity of zileuton. *J Pharmacol Exp Ther.* 1991;256(3):929-937.
- Abraham WM, et al. The 5-lipoxygenase inhibitor zileuton blocks antigen-induced late airway responses, inflammation and airway hyperresponsiveness in allergic sheep. *Eur J Pharmacol.* 1992;217(2-3):119-126.
- Kuvibidila S, et al. Hydroxyurea and Zileuton Differentially Modulate Cell Proliferation and Interleukin-2 Secretion by Murine Spleen Cells: Possible Implication on the Immune Function and Risk of Pain Crisis in Patients with Sickle Cell Disease. *Ochsner*
- Gounaris E, et al. Zileuton, 5-lipoxygenase inhibitor, acts as a chemopreventive agent in intestinal polyposis, by modulating polyp and systemic inflammation. *PLoS One.* 2015 Mar 6;10(3):e0121402

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