

Zileuton

Chemical Properties

CAS No. :	111406-87-2
Formula:	C ₁₁ H ₁₂ N ₂ O ₂ S
Molecular Weight:	236.29
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.

Biological Description

Description	Zileuton (A 64077) is a synthetic derivative of hydroxyurea with antiasthmatic properties. The leukotriene inhibitor zileuton blocks 5-lipoxygenase, which catalyzes the formation of leukotrienes from arachidonic acid; causes bronchodilation; decreases bronchial mucous secretion and edema; and may prevent or decrease the symptoms of asthma.
Targets(IC50)	Ferroptosis,COX,Lipoxygenase
In vitro	Zileuton inhibited PGE2 production in lipopolysaccharide-stimulated human whole blood. In rat carrageenan gum-induced pleurisy, Zileuton decreased PGE2 and 6-ketoprostaglandin F1 α pleural levels. In activated mouse peritoneal macrophages and macrophage J774, Zileuton significantly reduced PGE2 and 6-keto prostaglandin F1 α levels. In macrophages, Zileuton inhibited PG biosynthesis by interfering with arachidonic acid release.
In vivo	Zileuton inhibited PGE2 production in lipopolysaccharide-stimulated human whole blood. In rat carrageenan gum-induced pleurisy, Zileuton decreased PGE2 and 6-ketoprostaglandin F1 α pleural levels. In activated mouse peritoneal macrophages and macrophage J774, Zileuton significantly reduced PGE2 and 6-keto prostaglandin F1 α levels. In macrophages, Zileuton inhibited PG biosynthesis by interfering with arachidonic acid release.

Solubility Information

Solubility	DMSO: 126 mg/mL (533.24 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (42.32 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.2321 mL	21.1604 mL	42.3209 mL
5 mM	0.8464 mL	4.2321 mL	8.4642 mL
10 mM	0.4232 mL	2.116 mL	4.2321 mL
50 mM	0.0846 mL	0.4232 mL	0.8464 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

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