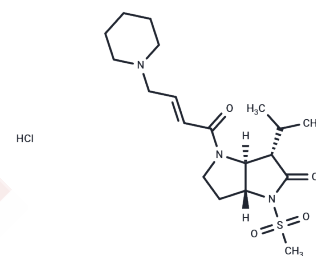


GW311616 hydrochloride

Chemical Properties

CAS No. : 197890-44-1
 Formula: C₁₉H₃₂ClN₃O₄S
 Molecular Weight: 433.99
 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	GW-311616 hydrochloride is a long duration, orally bioavailable, and selective human neutrophil elastase (HNE) inhibitor (IC ₅₀ : 22 nM; K _i : 0.31 nM).
Targets(IC ₅₀)	Others,Serine Protease
In vitro	GW311616A (20-320 μM; 48 hours; U937 cells) treatment inhibits proliferation and induces apoptosis in leukemia cells. GW-311616 (150 μM; U937 cells) treatment can increase the protein expression levels of Bax and decrease the expression of Bcl-2.GW-311616 (150 μM; 48 hours) markedly suppresses NE activity in U937 and K562 cells lines.
In vivo	GW-311616 has moderate terminal elimination half-life (t _{1/2}) of 1.1 hours and 1.5 hours for dog (2 mg/kg, oral), rat (2 mg/kg, oral), respectively.GW-311616 (2 mg/kg;?oral administration) rapidly abolishes the circulation of neutrophil elastase (NE) in dogs, while >90% inhibition is maintained for 4 days.?This prolonged effect is independent to be due to penetration of neutrophils in bone marrow by orally administrated GW-311616.

Solubility Information

Solubility	H ₂ O: 100 mg/mL (230.42 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	2.3042 mL	11.521 mL	23.042 mL
5 mM	0.4608 mL	2.3042 mL	4.6084 mL
10 mM	0.2304 mL	1.1521 mL	2.3042 mL
50 mM	0.0461 mL	0.2304 mL	0.4608 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

Ohbayashi H, et al. Neutrophil elastase inhibitors as treatment for COPD. *Expert Opin Investig Drugs*. 2002 Jul;11(7): 965-80.

Jiang KL, et al. Neutrophil elastase and its therapeutic effect on leukemia cells. *Mol Med Rep*. 2015 Sep;12(3):4165-4172.

Macdonald SJ, et al. The discovery of a potent, intracellular, orally bioavailable, long duration inhibitor of human neutrophil elastase--GW311616A a development candidate. *Bioorg Med Chem Lett*. 2001 Apr 9;11(7):895-8.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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