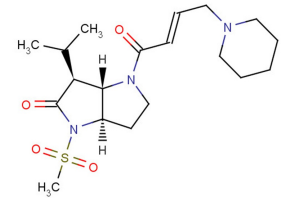


Data Sheet (Cat.No.T11525)

GW311616

Chemical Properties

CAS No.:	198062-54-3
Formula:	C ₁₉ H ₃₁ N ₃ O ₄ S
Molecular Weight:	397.53
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).



Biological Description

Description	GW-311616 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)	HNE: (k _i)0.31 nM
In vitro	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 cell lines. GW311616A (20-320 μM; 48 hours; U937 cells) treatment inhibits proliferation and induces apoptosis in leukemia cells [2].
In vivo	GW-311616 (2 mg/kg; p.o.) 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 the penetration of neutrophils in bone marrow by orally administrated GW-311616. GW-311616 has moderate terminal elimination half-life (t _{1/2}) of 1.1 hours and 1.5 hours for rat (2 mg/kg, oral), dog (2 mg/kg, oral), respectively [3].

Solubility Information

Solubility	DMSO: 44 mg/mL (110.68 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.516 mL	12.578 mL	25.155 mL
5 mM	0.503 mL	2.516 mL	5.031 mL
10 mM	0.252 mL	1.258 mL	2.516 mL
50 mM	0.05 mL	0.252 mL	0.503 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. Ohbayashi H, et al. Neutrophil elastase inhibitors as treatment for COPD. Expert Opin Investig Drugs. 2002 Jul;11(7):965-80.
2. Jiang KL, et al. Neutrophil elastase and its therapeutic effect on leukemia cells. Mol Med Rep. 2015 Sep;12(3):4165-4172.
3. 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.

Inhibitors · Natural Compounds · Compound Libraries

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