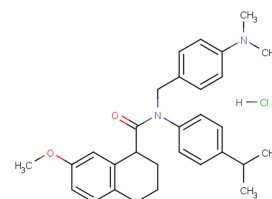


W-54011

Chemical Properties

CAS No.: 405098-33-1
Formula: C₃₀H₃₇ClN₂O₂
Molecular Weight: 493.08
Appearance: N/A
Storage: 0-4°C for short term (days to weeks), or -20°C for long term (months).

**Biological Description**

Description	W-54011 is a potent non-peptide C5a receptor antagonist. W-54011 inhibits the binding of ¹²⁵ I-labeled C5a to human neutrophils (K _i : 2.2 nM). W-54011 inhibits C5a-induced intracellular Ca ²⁺ mobilization, chemotaxis, and generation of ROS in human neutrophils (IC ₅₀ s: 3.1 nM, 2.7 nM, and 1.6 nM, respectively).
Targets(IC ₅₀)	C5a: (k _i) 2.2 nM Ca ²⁺ mobilization,: 3.1 nM Chemotaxis: 2.7 nM(k _i) ROS: 1.6 nM(k _i)
In vitro	W-54011 does not show agonistic activity at up to 10 μM and shifts rightward the concentration-response curves to C5a without depressing the maximal responses, showing that W-54011 is a full antagonist. At concentrations up to 10 μM, W-54011 does not affect Ca ²⁺ mobilization stimulated with sub-maximally effective concentrations of fMLP (1 nM), platelet-activating factor (0.3 nM), and IL-8 (0.1 nM). W-54011 is highly specific for the C5a receptor [1].
In vivo	W-54011 is able to inhibit the response in cynomolgus monkeys and gerbils (IC ₅₀ : 1.7 nM and 3.2 nM, respectively). W-54011 (3-30 mg/kg; p.o.; for 4 hours; male mongolian gerbils) treatment inhibited C5a-induced neutropenia in a dose-dependent manner in gerbils. The species selectivity of W-54011 is examined in rhC5a-induced intracellular Ca ²⁺ mobilization of neutrophils in various species [1].

Solubility Information

Solubility	DMSO: 28 mg/mL (56.79 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.028 mL	10.14 mL	20.281 mL
5 mM	0.406 mL	2.028 mL	4.056 mL
10 mM	0.203 mL	1.014 mL	2.028 mL
50 mM	0.041 mL	0.203 mL	0.406 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.

[Inhibitors](#) · [Natural Compounds](#) · [Compound Libraries](#)

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use.

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