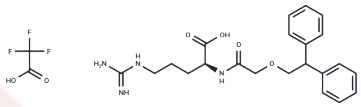
Data Sheet (Cat.No.T12851)

TargetMol

SB290157 trifluoroacetate

Chemical Properties



CAS No. : 1140525-25-2

Formula: C24H29F3N4O6

Molecular Weight: 526.51

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	SB290157 trifluoroacetate is a potent and selective antagonist of the C3a receptor, with an IC50 of 200 nM.
Targets(IC50)	Complement System
In vitro	SB 290157 is a competitive antagonist of 125I-C3a radioligand binding to rat basophilic leukemia-2H3 cells expressing the human C3aR (RBL-C3aR, IC50 of 200 nM). SB 290157 blocks C3a-induced C3aR internalization in a concentration-dependent manner and C3a-induced Ca2+ mobilization in RBL-C3aR cells and human neutrophils (IC50s of 27.7 and 28 nM, respectively). SB 290157 is selective for the C3aR in that. SB 290157 also inhibits C3a-induced Ca2+ mobilization of RBL-2H3 cells expressing the mouse and guinea pig C3aRs. It potently inhibits C3a-mediated ATP release from guinea pig platelets and inhibits C3a-induced potentiation of the contractile response to field stimulation of perfused rat caudal artery[1].
In vivo	SB 290157 effectively inhibits neutrophil recruitment in a guinea pig model of LPS-induced airway neutrophilia and reduces paw edema in a rat model of adjuvant-induced arthritis. This antagonist demonstrates a capacity to decrease joint swelling, achieving approximately 50% inhibition at a concentration of 30 mg/kg, but only at the 3-hour mark. Additionally, it significantly lowers C3 levels at 3 hours post-administration, indicating complement consumption compared to naive mice. An increase in C3 activation correlates with the graded concentration of anti-OVA pAb, further showcasing its biological activity (1, 2).

Solubility Information

Solubility	DMSO: 125 mg/mL (237.41 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: 4 mg/mL (7.6 mM),Sonication is recommended. *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.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8993 mL	9.4965 mL	18.993 mL
5 mM	0.3799 mL	1.8993 mL	3.7986 mL
10 mM	0.1899 mL	0.9496 mL	1.8993 mL
50 mM	0.038 mL	0.1899 mL	0.3799 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

Ames RS, et al. Identification of a selective nonpeptide antagonist of the anaphylatoxin C3areceptor that demonstrates antiinflammatory activity in animal models. J Immunol. 2001 May 15;166(10):6341-8.
Hutamekalin P, et al. Effect of the C3a-receptor antagonist SB 290157 on anti-OVA polyclonalantibody-induced arthritis. J Pharmacol Sci. 2010;112(1):56-63.