Golotimod

Cat. No.: HY-14743

CAS No.: 229305-39-9

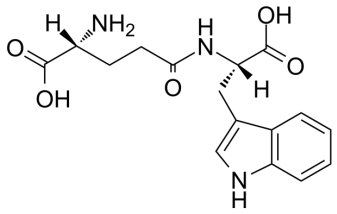
Molecular Formula: $C_{16}H_{19}N_3O_5$

Molecular Weight: 333.34

Target: Bacterial; STAT

Pathway: Anti-infection; JAK/STAT Signaling; Stem Cell/Wnt

Storage: -20°C, sealed storage, away from moisture and light
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 125 mg/mL (374.99 mM; Need ultrasonic)

Preparing Stock Solutions	Concentration \ Solvent \ Mass	1 mg	5 mg	10 mg
	1 mM	2.9999 mL	14.9997 mL	29.9994 mL
	5 mM	0.6000 mL	2.9999 mL	5.9999 mL
	10 mM	0.3000 mL	1.5000 mL	2.9999 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Golotimod (SCV-07), an immunomodulating peptide with antimicrobial activity, significantly increases the efficacy of antituberculosis therapy, stimulates thymic and splenic cell proliferation, and improves macrophage function. Golotimod (SCV-07) inhibits STAT3 signaling and modulates the duration and severity of oral mucositis in animal models that received radiation or a combination of radiation and Cisplatin. Golotimod (SCV-07) is also a potential therapeutic for recurrent genital herpes simplex virus type 2 (HSV-2)[1][2][3].

IC_{50} & Target

STAT3

In Vivo

Golotimod (SCV-07) (oral gavage or subcutaneous injection, 100 μg/kg, 5 days) reduces experimental recurrent genital HSV-2 disease by oral administration, more importantly, oral SCV07 after fasting shows a greater reduction in incidence and severity than SCV-07 without fasting in female hartley guinea pigs[1].

Golotimod (SCV-07) (subcutaneous injection, once or twice a day from days 1 to 20, 100 μg/kg) can reduce the severity and duration of acute and split radiation-induced oral mucositis (OM) and short the duration of ulcerative OM in male LVG golden Syrian Hamsters[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female Hartley guinea pigs (250-300 g) infected HSV-2[1]
Dosage:	100 μg/kg
Administration:	Oral gavage or subcutaneous injection; 5 days
Result:	Reduced incidence of lesions from 55% (one week before treatment) to only 18% by oral administration, and showed no significant reduction in disease by subcutaneous injection of SCV-07.

Animal Model:	Male LVG golden Syrian Hamsters weighing approximately 80 g with radiation-induced mucositis[3]
Dosage:	10, 100 μg/kg or 1 mg/kg
Administration:	Subcutaneous injection; once or twice a day from days 1 to 20
Result:	Showed a peak mucositis of 3.0 on day 18 in the control group compared to only 2.2 in the test group, and the mucositis score in the SCV-07 treated hamsters was only 6.3% compared to 28.1% in the control group at dose of 100 μg/kg. Significantly decreased the severity and duration of oral mucositis (OM) at dose of 10 μg/kg, 100 μg/kg or 1 mg/kg.

REFERENCES

[1]. Rose WA 2nd, et al. An immunomodulating dipeptide, SCV-07, is a potential therapeutic for recurrent genital herpes simplex virus type 2 (HSV-2). Int J Antimicrob Agents. 2008 Sep;32(3):262-6.

[2]. Geiger JL, et al. The STAT3 pathway as a therapeutic target in head and neck cancer: Barriers and innovations. Oral Oncol. 2016 May;56:84-92.

[3]. Watkins B, et al. Attenuation of radiation- and chemoradiation-induced mucositis using gamma-D-glutamyl-L-tryptophan (SCV-07). Oral Dis. 2010 Oct;16(7):655-60.

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