
Product Data Sheet

Product Name: CCR6 antagonist 1

Cat. No.: GC67788

Chemical Properties

Cas. No. 588674-64-0

Formula $C_{17}H_{12}F_3NO_2$

M.Wt 319.28

Solubility DMSO : ≥ 100 mg/mL (313.20 mM)

Storage Store at $-20^{\circ}C$

General tips For obtaining a higher solubility , please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

Background

CCR6 antagonist 1 is a **CCR6** antagonist that inhibits the **CCL20/CCR6** axis. CCR6 antagonist 1 can be used in the research of autoimmune-mediated inflammatory diseases, such as inflammatory bowel diseases (IBDs)^[1].

CCR6 antagonist 1 (compound 1b, $50 \mu M$, 3 h) blocks the CCL20-induced $CD4^{+}$ T cell migration^[1].

CCR6 antagonist 1 (30 nM- $300 \mu M$, 20 min) inhibits miniGi recruitment to CCR6 induced by CCL20, and β -arrestin-1 recruitment to CCR6 and CCR5 by CCL20 and CCL5 (5 nM), respectively^[1].

Cell Migration Assay ^[1]

Cell Line: CCL20 (500 ng/mL)-induced $CCR6^{+}CD4^{+}$ T cell

Concentration: $0.5, 5, 50 \mu M$

Incubation Time: 3 h

Caution: Product has not been fully validated for medical applications. For research use only.

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Result: Inhibited CCL20-induced cell migration at 50 μ M.

CCR6 antagonist 1 (compound 1b, 1 mg/kg, s.c., twice daily for 3 days) alleviates TNBS-induced inflammatory responses in mice^[1].

CCR6 antagonist 1 (1 mg/kg, s.c., twice, before and after zymosan treatment) shows anti-inflammatory effects

in Zymosan-induced peritonitis mice^[1].

Animal Model: Murine model of colitis (5 mg/mouse TNBS-induced)^[1]

Dosage: 1 mg/kg

Administration: Subcutaneous injection (s.c.), twice daily for 3 days.

Result: Improved mice general conditions, attenuated macroscopic injury and counteracted neutrophils infiltration, both in the colon and in lungs.

Animal Model: Zymosan-induced peritonitis mice^[1]

Dosage: 1 mg/kg

Administration: Subcutaneous injection (s.c.), twice, before and after zymosan treatment

Result: Significantly reduced the total protein content and myeloperoxidase activity in the peritoneal lavage.

[1]. Maria Grazia Martina, et al. Discovery of small-molecules targeting the CCL20/CCR6 axis as first-in-class inhibitors for inflammatory bowel diseases. Eur J Med Chem. 2022 Aug 29;243:114703.

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