Web: www.taiclone.com
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INCB3344

Catalog No: tcsc0347

Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
1262238-11-8

Formula:
$C_{29}H_{34}F_3N_3O_6$

Pathway:
Immunology/Inflammation;GPCR/G Protein

Target:
CCR;CCR

Purity / Grade:
>98%

Solubility:
H2O :

Observed Molecular Weight:
577.59

Product Description

INCB3344 is a potent **CCR2** antagonist with **IC_{50}** values of 5.1 nM (hCCR2) and 9.5 nM (mCCR2) in binding antagonism and 3.8 nM

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(hCCR2) and 7.8 nM (mCCR2) in antagonism of chemotaxis activity.

IC50 & Target: IC50: 5.1 nM (hCCR2), 9.5 nM (mCCR2)[1]

In Vitro: INCB3344 is a potent antagonist towards rat and cynomolgus CCR2 as well, displaying IC_{50} values of 7.3 and 16 nM in binding antagonism and 2.7 and 6.2 nM in antagonism of chemotaxis activity, respectively. INCB3344 is a selective hCCR2 antagonist, exhibiting IC_{50} values of more than 1 μM against a panel of >50 ion channels, transporters, chemokine receptors and other selected GPCRs. It is also a selective mCCR2 antagonist, showing IC_{50} values of >1 μM and >3 μM against murine CCR1 and murine CCR5, respectively, the two most homologous chemokine receptors to mCCR2[1]. Characterization of the pharmacological activity of INCB3344 is first evaluated by testing its ability to inhibit CCL2 binding to CCR2 in a whole cell binding assay using a murine monocyte cell line, WEHI-274.1 and ^{125}I-labeled mCCL2 as a tracer. The binding IC_{50} of INCB3344 in this assay is determined to be 10±5 nM, and inhibition of >90% binding is observed at a concentration of 90 nM[2].

In Vivo: When administered intravenously to CD-1 mice, INCB3344 exhibits a high clearance and a moderate volume of distribution, resulting in a short half life of 1 h. Despite its high clearance, however, good oral exposure is achieved, with an AUC at 2664 nM h at a dose of 10 mg/kg. The oral bioavailability is 47%. By comparison, slightly better oral exposure (AUC=3888 nM h) is obtained when administered orally to Balb/c mice at the same dose. This PK property, couple with its potent anti-mCCR2 activity and good selectivity, makes this compound suitable for model studies in rodents[1]. INCB3344 prevents deoxycorticosterone acetate (DOCA)/salt-induced changes in vascular expression of CCR2. In a separate series of experiments, CCR2 expression is elevated (≈1.5-fold higher) in aortas from mice that receive INCB3344 from days 7 to 21 of the DOCA/salt treatment period compare with sham animals; however, this level of CCR2 expression is significantly lower than that observed in the vehicle-treated group (P[3].