PS372424 hydrochloride

Cat. No.: HY-111149A

CAS No.: 1596362-29-6

Molecular Formula: $C_{33}H_{45}ClN_6O_4$

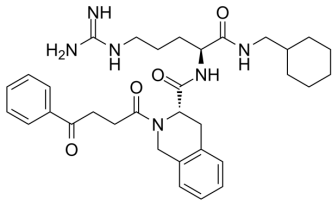
Molecular Weight: 625.2

Target: CXCR

Pathway: GPCR/G Protein; Immunology/Inflammation

Storage: 4°C, sealed storage, away from moisture

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



H−Cl

SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (399.87 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.5995 mL	7.9974 mL	15.9949 mL
	5 mM	0.3199 mL	1.5995 mL	3.1990 mL
	10 mM	0.1599 mL	0.7997 mL	1.5995 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (3.33 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (3.33 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (3.33 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

PS372424 hydrochloride, a three amino-acid fragment of CXCL10, is a specific human CXCR3 agonist with anti-inflammatory activity. PS372424 hydrochloride prevents human T-cell migration in a humanized model of arthritic inflammation[1][2].

IC_{50} & Target

Human CXCR3

In Vitro

PS372424 (100 ng/mL) increases p-Erk1 and p-Erk2 in U87-CXCR3-A cells after 5 min of stimulation[1].

PS372424 (10-200 nM; 30 min) causes a concentration-dependent phosphorylation of CCR5 on $CXCR3^+$ T cells not in $CXCR3^-$ T cells[2].

PS372424 competes for binding of radiolabeled CXCL10 to membranes prepared from HEK293/CXCR3 Gqi5 cells with an IC_{50}

of 42±21 nM[3].

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

Western Blot Analysis[2]

Cell Line:	$CXCR3^+$ T cells and $CXCR3^-$ T cells
Concentration:	10, 50, 100, or 200 nM
Incubation Time:	30 minutes
Result:	Caused a concentration-dependent phosphorylation of CCR5 on $CXCR3^+$ T cells. Did not result in phosphorylation of CCR5 on $CXCR3^-$ T cells.

REFERENCES

[1]. Boyé K, et al. The role of CXCR3/LRP1 cross-talk in the invasion of primary brain tumors. Nat Commun. 2017 Nov 17;8(1):1571.

[2]. O'Boyle G, et al. Chemokine receptor CXCR3 agonist prevents human T-cell migration in a humanized model of arthritic inflammation. Proc Natl Acad Sci U S A. 2012 Mar 20;109(12):4598-603.

[3]. Stroke IL, et al. Identification of CXCR3 receptor agonists in combinatorial small-molecule libraries. Biochem Biophys Res Commun. 2006 Oct 13;349(1):221-8.

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