L-161982

Cat. No.: HY-108559

CAS No.: 147776-06-5

Molecular Formula: $C_{32}H_{29}F_3N_4O_4S_2$

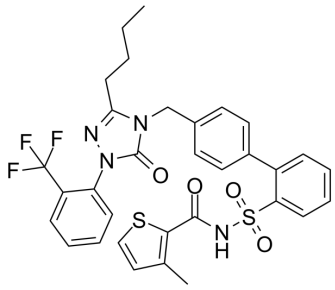
Molecular Weight: 654.72

Target: Prostaglandin Receptor

Pathway: GPCR/G Protein

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (152.74 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.5274 mL	7.6369 mL	15.2737 mL
	5 mM	0.3055 mL	1.5274 mL	3.0547 mL
	10 mM	0.1527 mL	0.7637 mL	1.5274 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (3.82 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

L-161982 is a selective EP4 receptor antagonist. L-161982 completely blocks PGE2-induced ERK phosphorylation and cell proliferation of HCA-7 cells. L-161982 alleviates collagen-induced arthritis in mice[1][2].

In Vitro

L-161982 (10 μM; 2 hours) blocks PGE2-stimulated cell proliferation of HCA-7 cells[1].
L-161982 (10 μM; 1 hour) blocks PGE2-stimulated ERK phosphorylation in HCA-7 cells[1].
L-161982 induces apoptosis, cell cycle arrest, and inhibits prostaglandin E2-induced proliferation in oral squamous carcinoma Tca8113 cells[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[1]

Cell Line:	HCA-7 cells

Concentration:	10 μM
Incubation Time:	2 hours
Result:	Blocked PGE2-induced cell proliferation.

In Vivo

L-161982 (5 mg/kg; i.p.; once per day for 2 weeks) reduces arthritis lesions and lesion progression in CIA mice[2].

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

Animal Model:	Female DBA/1 mice of 6 to 8 weeks old (collagen-induced arthritis (CIA) mice model)[1]
Dosage:	5 mg/kg
Administration:	i.p.; once per day for 2 weeks
Result:	Showed less joint swelling and lower arthritis score after 35 days post immunization.

REFERENCES

[1]. Li X, et al.The EP4 antagonist, L-161,982, induces apoptosis, cell cycle arrest, and inhibits prostaglandin E2-induced proliferation in oral squamous carcinoma Tca8113 cells.J Oral Pathol Med. 2017 Nov;46(10):991-997.

[2]. Cherukuri DP, et al. The EP4 receptor antagonist, L-161,982, blocks prostaglandin E2-induced signal transduction and cell proliferation in HCA-7 colon cancer cells.Exp Cell Res. 2007 Aug 15;313(14):2969-79.

[3]. Chen L, et al. L161982 alleviates collagen-induced arthritis in mice by increasing Treg cells and down-regulating Interleukin-17 and monocyte-chemoattractant protein-1 levels.BMC Musculoskelet Disord. 2017 Nov 16;18(1):462.

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