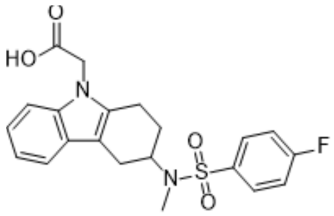
CAY10471

Cat. No.:	HY-13706A
CAS No.:	627865-18-3
Molecular Formula:	$C_{21}H_{21}FN_2O_4S$
Molecular Weight:	416.47
Target:	Prostaglandin Receptor
Pathway:	GPCR/G Protein
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



Rotation (+)

BIOLOGICAL ACTIVITY

Description	CAY10471 (TM30089) is a potent, selective, and orally active prostaglandin D2 receptor CRTH2 antagonist. CAY10471 attenuates the progression of tubulointerstitial fibrosis and chronic contact hypersensitivity (CHS) in animal model[1][2][3].
IC_{50} & Target	CRTH2

In Vitro

CAY10471 (1 μM; 1-24 hours) decreases 15dPGJ2-induced phosphorylation of p38 MAP kinase significantly in PC12 cells[1].

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

Western Blot Analysis[1]

Cell Line:	PC12 cells
Concentration:	1 μM
Incubation Time:	1 or 24 hours
Result:	Blocked 15d-PGJ2-induced p38 MAP kinase activation.

In Vivo

CAY10471 (oral treatment; 2 mg/kg; challenged on day 22 or over 10 consecutive days) shows a diminished inflammation in chronic contact hypersensitivity (CHS) and IgE-CAI model. It blocks CRTH2 partly, but significantly suppresses inflammation in mice[2].

CAY10471 (oral adminstration; 20 mg/kg; twice daily; beginning 3/4/5 days before UUO) significantly attenuates interstitial collagen deposition in the cortex when compared with the vehicle (8.40% versus 14.85%). Oral administration from 3 days after UUO also significantly attenuates interstitial collagen deposition in the cortex compared with vehicle (9.63% versus 14.44%). However, oral administration beginning 5 days after UUO has little effect on interstitial collagen deposition in the cortex when compared with vehicle (14.61% versus 15.09%). Unilateral ureteral obstruction (UUO)[3].

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

Animal Model:	Balb/c mice, $DP^{-/-}$ mice, $CRTH2^{-/-}$ mice[2]
Dosage:	2 mg/kg
Administration:	Oral treatment; once daily; challenged on day 22 or over 10 consecutive days

Result:	Significantly suppressed both CHS and IgE-CAI inflammatory responses.

Animal Model:	C57BL/6 mice[3]
Dosage:	20 mg/kg
Administration:	Oral treatment; twice daily; beginning 3/4/5 days before UUO
Result:	Slowed the progression of renal fibrosis in the obstructed kidneys.

REFERENCES

[1]. Hatanaka M, et al. 15d-prostaglandin J2 enhancement of nerve growth factor-induced neurite outgrowth is blocked by the chemoattractant receptor- homologous molecule expressed on T-helper type 2 cells (CRTH2) antagonist CAY10471 in PC12 cells. J Pharmacol Sci. 2010;113(1):89-93. Epub 2010 Apr 16.

[2]. Matsushima Y, et al. Distinct roles of prostaglandin D2 receptors in chronic skin inflammation.Mol Immunol. 2011 Oct;49(1-2):304-10.

[3]. Ito H, et al. PGD2-CRTH2 pathway promotes tubulointerstitial fibrosis.J Am Soc Nephrol. 2012 Nov;23(11):1797-809.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA