(Rac)-Tanomastat

Cat. No.: HY-12168B

CAS No.: 179545-76-7

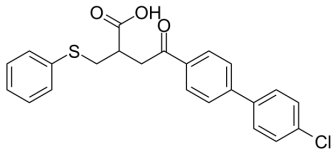
Molecular Formula: $C_{23}H_{19}ClO_3S$

Molecular Weight: 410.91

Target: MMP

Pathway: Metabolic Enzyme/Protease

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

(Rac)-Tanomastat ((Rac)-BAY 12-9566) is the racemate of Tanomastat. Tanomastat (BAY 12-9566) is an orally bioavailable, non-peptidic biphenyl matrix metalloproteinases (MMPs) inhibitor with a Zn-binding carboxyl group. The K_i values are 11, 143, 301, and 1470 nM for MMP-2, MMP-3, MMP-9, MMP-13 respectively. Tanomastat shows anti-invasive and antimetastatic activity in several experimental tumor models[1][2][3].

IC_{50} & Target

MMP-2	MMP-3	MMP-9	MMP-13
11 nM (Ki)	143 nM (Ki)	301 nM (Ki)	1470 nM (Ki)

In Vitro

Tanomastat (BAY 12-9566) (1-10000 nM; 6 hours) prevents matrix invasion by endothelial cells in a concentration-dependent manner (IC_{50}=840 nM), without affecting cell proliferation[2].

Tanomastat (BAY 12-9566) (1-00 μM; 5 days) inhibits tubule formation completely at 15-100 μM[3].

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

In Vivo

Tanomastat (BAY 12-9566) (100 mg/kg; p.o.; daily for a 7-week period) inhibits local tumor regrowth without causing any toxic effect, and inhibits the number and volume of lung metastases[3].

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

Animal Model:	Six- to eight-week-old female BALB/c nude mice (bearing MDA-MB-435 cells)[3]
Dosage:	100 mg/kg
Administration:	P.o.; daily for a 7-week period
Result:	Inhibited local tumor regrowth by 58% without causing any toxic effect, and inhibited the number and volume of lung metastases by 57 and 88%, respectively.

REFERENCES

[1]. Leung D, et al. Protease inhibitors: current status and future prospects. J Med Chem. 2000 Feb 10;43(3):305-41.

[2]. Gatto C, et al. BAY 12-9566, a novel inhibitor of matrix metalloproteinases with antiangiogenic activity. Clin Cancer Res. 1999 Nov;5(11):3603-7.

[3]. Nozaki S, et al. Activity of biphenyl matrix metalloproteinase inhibitor BAY 12-9566 in a human breast cancerorthotopic model. Clin Exp Metastasis. 2003;20(5):407-12.

[4]. Harold Clinton Eugene Kluender, et al. Substituted 4-biarylbutyric or 5-biarylpentanoic acids and derivatives as matrix metalloprotease inhibitiors. WO1996015096A1.

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