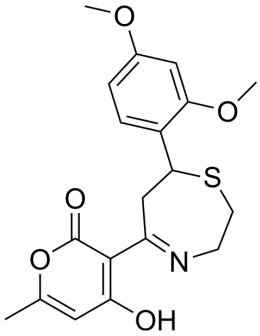
KF38789

Cat. No.:	HY-103358
CAS No.:	257292-29-8
Molecular Formula:	$C_{19}H_{21}NO_5S$
Molecular Weight:	375.44
Target:	P-selectin
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 : 25 mg/mL (66.59 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6635 mL	13.3177 mL	26.6354 mL
	5 mM	0.5327 mL	2.6635 mL	5.3271 mL
	10 mM	0.2664 mL	1.3318 mL	2.6635 mL

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

BIOLOGICAL ACTIVITY

Description

KF38789 is a selective inhibitor of P-selectin-PSGL-1 binding. KF38789 inhibits the binding of U937 cells to immobilized P-selectin immunoglobulin G chimeric protein (P-selectin-Ig) with an IC_{50} value of 1.97 μM[1].

In Vitro

KF38789 inhibits P-selectin-induced superoxide production from human polymorphonuclear cells. Intravenously injected KF38789 significantly inhibits the thioglycollate (TG)-induced accumulation of leukocytes in the mouse peritoneal cavity[1].
KF38789 displays a concentration-dependent inhibition of U937 cell adhesion to immobilized P-selectin-Ig with an IC_{50} value of 1.97±0.74 μM[1].
KF38789 specifically inhibits P-selectin-dependent cell adhesion and the leukocyte recruitment in mouse peritonitis[1].
KF38789 (5 μM) significantly reduces closure of a 500-μm gap between confluent sheets of Human corneal epithelial (HCE)-T cells over an 8-hr period (by -40%)[2].
Corneal epithelial cell migration is reduced in the presence of KF38789 (5 μM) [2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

KF38789 can block P-selectin-mediated binding in vitro and leukocyte accumulation in vivo[1].
Intraperitoneal injection of the P-selectin inhibitor KF38789 (daily intraperitoneal injection of 10mg/kg for 12 days) significantly reduces mechanical allodynia in the facial carrageenan-injected mice[3].

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

Animal Model:	BALB/c mice[1]
Dosage:	1 mg/kg
Administration:	Intravenously administrated
Result:	Significantly reduced leukocyte accumulation.

Animal Model:	Twenty-four adult male C57BL/6J (B6) mice, about 6-8 weeks of age and weighing approximately 20-30 g[3]
Dosage:	10 mg/kg, 1 mg/kg, 0.1 mg/kg, 0.01 mg/kg or 0.001 mg/kg
Administration:	Intraperitoneal injection daily for 12 days
Result:	Significantly reduced mechanical allodynia in the facial carrageenan-injected mice.

REFERENCES

[1]. S Ohta, et al. Inhibition of P-selectin specific cell adhesion by a low molecular weight, non-carbohydrate compound, KF38789. Inflamm Res. 2001 Nov;50(11):544-51.

[2]. Peter J Gillies, et al. Demonstration of P-selectin expression and potential function in human corneal epithelial cells. Exp Eye Res. 2018 Nov;176:196-206.

[3]. Kay-Wee Poh, et al. Global gene expression analysis in the mouse brainstem after hyperalgesia induced by facial carrageenan injection--evidence for a form of neurovascular coupling? Pain. 2009 Mar;142(1-2):133-41.

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