Product Data Sheet

Product Name: KP496
Cat. No.: GC31983

Chemical Properties

Cas. No.	217799-03-6		
SMILES	O=C(O)C1=CC=CC=C1S(=O)(N(CCCCNS(=O)(C2=CC=C(Cl)C=C2)=O)CC3=CC=CC(OCC4=NC(C(C)C)=CS4)=C3)=O		
Formula	$C_{31}H_{34}ClN_3O_7S_3$	M.Wt	692.27
Solubility	DMSO : 100 mg/mL (144.45 mM; Need ultrasonic)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	KP496		

Protocol

Animal experiment:

Male mice (9 weeks old, 33 to 42g are used) BLM solution (15 mg/mL) is intravenously injected into mice (0.1 mL/10 g of body weight) on day 0. Mice are sacrificed on day 7 or 21. They are exposed to an aerosol of KP496 (KP-496) solution (0.5%) for 30 min using a pressure nebulizer 1 h before and 3 h after BLM-injection on day 0. From day 1 to the day before sacrificed, mice are exposed to KP496 (0.5%) for 30 min morning and evening[1].

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References:

[1]. Kurokawa S, et al. Effect of inhaled KP-496, a novel dual antagonist of the cysteinyl leukotriene and thromboxane A2 receptors, on a bleomycin-induced pulmonary fibrosis model in mice. Pulm Pharmacol Ther. 2010 Oct;23(5):425-31.
[2]. Ishimura M, et al. Effects of KP-496, a novel dual antagonist for cysteinyl leukotriene receptor 1 and thromboxane A2 receptor, on Sephadex-induced airway inflammation in rats. Biol Pharm Bull. 2009 Jun;32(6):1057-61.

Background

KP496 is a selective, dual antagonist for Leukotriene D4 receptor and Thromboxane A2 receptor.

KP496 significantly inhibits acute (day 7) and chronic (day 21) lung inflammation. KP496 attenuates the number of lymphocytes on day 7 and those of macrophages, neutrophils, and eosinophils on days 7 and 21. KP496 and prednisolone significantly suppress the increase of hydroxyl-L-proline content in the lung. Compare to respective vehicle control group, the inhibition ratio of KP496 and prednisolone for increase of hydroxyl-L-proline content is about 74 and 63%, respectively[1]. The KP496 (100 mg/head) group and prednisolone (10 mg/kg) group exhibit significant inhibition of numbers of infiltrating total cells, eosinophils, monocytes/macrophages, and lymphocytes compare with the control group. Infiltration of all types of cells except neutrophils is decreased in the

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KP496 (30m g/head) group, though not to significant extents[2].

[1]. Kurokawa S, et al. Effect of inhaled KP-496, a novel dual antagonist of the cysteinyl leukotriene and thromboxane A2 receptors, on a bleomycin-induced pulmonary fibrosis model in mice. Pulm Pharmacol Ther. 2010 Oct;23(5):425-31. [2]. Ishimura M, et al. Effects of KP-496, a novel dual antagonist for cysteinyl leukotriene receptor 1 and thromboxane A2 receptor, on Sephadex-induced airway inflammation in rats. Biol Pharm Bull. 2009 Jun;32(6):1057-61.

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