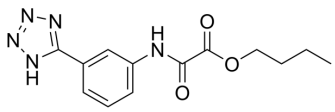
Tazanolast

Cat. No.:	HY-101810
CAS No.:	82989-25-1
Molecular Formula:	$C_{13}H_{15}N_5O_3$
Molecular Weight:	289.29
Target:	Others
Pathway:	Others

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 : 66.67 mg/mL (230.46 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.4567 mL	17.2837 mL	34.5674 mL
	5 mM	0.6913 mL	3.4567 mL	6.9135 mL
	10 mM	0.3457 mL	1.7284 mL	3.4567 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (8.64 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Tazanolast is a selective mast-cell-stabilizing agent, on ozone-induced airway hyperresponsiveness in guinea pigs.

In Vitro

Tazanolast, an orally active mast-cell-stabilizing drug, which has been shown to suppress passive cutaneous anaphylaxis, Schultz-Dale reaction in isolated tracheal muscle, and experimental asthma without antagonistic actions upon histamine- and leukotriene-D4-induced contraction, IgE-mediated or compound 48/80-induced histamine release from mast cells and lung fragments, compound 48/80-induced Ca^{2+} uptake into mast cells from extracellular medium, compound 48/80-induced translocation of protein kinase C from the cytosol to the membrane fraction of mast cells, and inositol trisphosphate production without directly inhibiting phospholipase C in mast cells[1].

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

In Vivo

Tazanolast administered before ozone exposure at doses of 30, 100, or 300 mg/kg inhibits ozone-induced airway hyperresponsiveness in a dose-dependent manner. Tazanolast administered after ozone exposure does not inhibit the

airway hyperresponsiveness. Tazanolast does not significantly change the cell distribution of bronchoalveolar lavage (BAL) cells at 2 h after the exposure. Tazanolast significantly inhibits ozone-induced airway hyperresponsiveness in guinea pigs[1].

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PROTOCOL

Animal Administration [1]

Pigs[1]

The 10 guinea pigs are also exposed to 2 ppm ozone for 2 h and then are orally administered 300 mg/kg of Tazanolast (T-300 post group). At 2 h after exposure PC200-MCh of each animal is determined. Thereafter, BAL is performed for each animal. On Day 1, preexposure PC200-MCh is determined for 50 guinea pigs. On Day 2, guinea pigs in groups of 10 are orally administered Tazanolast at a dose of 30 mg/kg (T-30 group), 100 mg/kg (T-100 group), or 300 mg/kg (T-300 group), or vehicle alone (vehicle group). After 30 min, the animals are exposed to 2 ppm ozone for 2 h. In addition, the other 10 guinea pigs are also exposed to 2 ppm ozone for 2 h and then are orally administered 300 mg/kg of Tazanolast (T-300 post group). At 2 h after exposure PC200-MCh of each animal is determined. Thereafter, BAL is performed for each animal.

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

REFERENCES

[1]. Igarashi A, et al. Tazanolast inhibits ozone-induced airway hyperresponsiveness in guinea pigs. Am J Respir Crit Care Med. 1998 May;157(5 Pt 1):1531-5.

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