Ablukast

Cat. No.: HY-118958

CAS No.: 96566-25-5

Molecular Formula: $C_{28}H_{34}O_8$

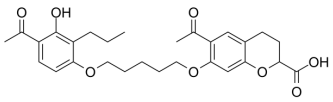
Molecular Weight: 498.56

Target: Leukotriene Receptor

Pathway: GPCR/G Protein

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 : 100 mg/mL (200.58 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.0058 mL	10.0289 mL	20.0578 mL
	5 mM	0.4012 mL	2.0058 mL	4.0116 mL
	10 mM	0.2006 mL	1.0029 mL	2.0058 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (5.01 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.01 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Ablukast (Ro 23-3544) is a specific and active leukotriene receptor antagonist. Ablukast effectively reduces LTC4- and antigen-induced bronchoconstriction[1][2]. Ablukast is LTD4 receptor antagonist[3].

IC_{50} & Target

LTD_4

In Vitro

Ablukast (Ro 23-3544) is tested for its efficacy in modulating dinitrofluorobenzene (DNFB)-induced allergic and croton oil-induced irritant contact dermatitis in mouse ears. Treatment shortly after elicitation of the dermatitis, and for up to 5 days thereafter, was moderately effective in suppressing DNFB-induced ear swelling in a dose-dependent fashion. Daily pre-treatment of the ears for 1 week causes a more marked reduction of DNFB-induced ear swelling during the first 48 h after elicitation[2].

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

In Vivo

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Animal Model:	Female BALB/c mice[2]
Dosage:	Concentrations of 0.1 , 0.5 , 1.0 and 5.0 % of Ablukast
Administration:	Applied to one of the pretreated ears 1 h after elicitation and at 24 h intervals on the following 4 days; three times daily
Result:	Effectively reduced DNFB-induced ear swelling.

REFERENCES

[1]. M O'Donnell, et al. Pharmacological profile of Ro 23-3544, a new aerosol active leukotriene receptor antagonist. Adv Prostaglandin Thromboxane Leukot Res. 1987;17A:512-8.

[2]. T Rosenbach, et al. Studies on the role of leukotrienes in murine allergic and irritant contact dermatitis. Br J Dermatol. 1988 Jan;118(1):1-6.

[3]. Hans-Michael Eggenweiler, et al. Pyrrolopyrimidines as phosphodiesterase VII inhibitors. US7498334B2.

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