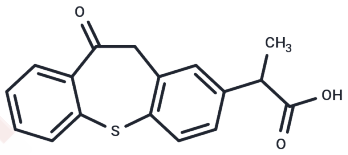
Data Sheet (Cat.No.T6737)

TargetMol

Zaltoprofen

Chemical Properties



CAS No. : 74711-43-6

Formula: C17H14O3S

Molecular Weight: 298.36

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Zaltoprofen (Soleton) is a Cox-1 and Cox-2 inhibitor, which is used for the treatment of arthritis.
Targets(IC50)	COX
In vitro	Zaltoprofe is a non-steroidal anti-inflammatory drug (NSAID) that effectively inhibits cyclooxygenase-2 with minimal side effects on the gastrointestinal tract. Zaltoprofe binds to a specific site of the bradykinin B2 receptor protein, therefore, the effect of Zaltoprofen on the bradykinin-evoked response of adult DRG neurons can be investigated to investigate possible interaction sites. Zaltoprofen is the most effective inhibitor of bradykinin enhancing capsaicin-induced Ca2+ uptake into DRG neurons. Zaltoprofen also significantly inhibits bradykinin-induced 12-lipoxygenase (12-LOX) activity and slow bradykinin-induced release of the substance P from DRG neurons. Zaltoprofe showed a potent analgesic effect on BK (i.pl.)-induced hyperalgesia at 1 nmol, whereas loxoprofen or its active metabolite loxoprofen-SRS did not. Zaltoprofe also inhibits [Tyr8]-BK-induced nociception in that it is a type B2 receptor specific agonist; but does not affect the nociception induced by [lysine-DES-Arg9]-BK, which is type B1 BK receptor specific agonist. In primary sensory neurons, Zaltoprofe produces an analgesic effect of a bradykinin-induced nociceptive response by blocking the B(2) receptor-mediated pathway. Zaltoprofe completely inhibits Ca2+ increase induced by bradykinin, which is inhibited by the B(2) antagonist D-Arg-[Hyp(3), Thi(5,8), D-Phe(7)]-bradykinin, but not B(1) Antagonist.
In vivo	After 8 hours of ConA treatment, mice were administrated of Zaltoprofen(10 mg/kg) resulting in inhibition of ConA-induced body weight loss. The combination of 10 mg/kg Zaltoprofen and ConA resulted in a 4-fold increase in food intake in mice compared to ConA only. Therefore, Zaltoprofen increased weight loss in ConA-treated mice.

Solubility Information

Solubility	Ethanol: 29 mg/mL (97.2 mM),Sonication is recommended. DMSO: 75 mg/mL (251.37 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)

In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (6.7 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.3517 mL	16.7583 mL	33.5166 mL
5 mM	0.6703 mL	3.3517 mL	6.7033 mL
10 mM	0.3352 mL	1.6758 mL	3.3517 mL
50 mM	0.067 mL	0.3352 mL	0.6703 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Tang HB, et al. Neuropharmacology, 2005, 48(7), 1035-1042.
Hirate K, et al. Neurosci Res, 2006, 54(4), 288-294.
Matsumoto M, et al. Neurosci Lett, 2006, 397(3), 249-253.
Okamoto T, et al. Int J Mol Med, 2002, 9(4), 369-372.
Okamoto T, et al. Int J Mol Med, 2001, 8(3), 315-317.