Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

MK591 (free acid)

Catalog No: tcsc0953

Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
136668-42-3

Formula:
$C_{34}H_{35}ClN_2O_3S$

Pathway:
Immunology/Inflammation

Target:
FLAP

Purity / Grade:
>98%

Solubility:
H2O :

Alternative Names:
Quiflapon

Observed Molecular Weight:
587.17

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Product Description

MK591 (free acid) is a selective and specific 5-Lipoxygenase-activating protein (FLAP) inhibitor with an IC_{50} value of 1.6 nM in a FLAP binding assay.

IC50 & Target: IC50 value: 1.6 nM (FLAP)[1].

In Vitro: MK591 (free acid) is a potent inhibitor of leukotriene (LT) biosynthesis in intact human and elicited rat polymorphonuclear leukocytes (PMNLs) (IC_{50} values 3.1 and 6.1 nM, respectively) and in human, squirrel monkey, and rat whole blood (IC_{50} values 510, 69, and 9 nM, respectively). MK591 (free acid) has no effect on rat 5-lipoxygenase. MK591 (free acid) has a high affinity for 5-lipoxygenase activating protein (FLAP) as evidenced by an IC_{50} value of 1.6 nM in a FLAP binding assay and inhibition of the photoaffinity labelling of FLAP by two different photoaffinity ligands. Inhibition of activation of 5-lipoxygenase was shown through inhibition of the translocation of the enzyme from the cytosol to the membrane in human PMNLs[1].

In Vivo: MK591 (free acid) is a potent inhibitor of LT biosynthesis in vivo, first, following ex vivo challenge of blood obtained from treated rats and squirrel monkeys, second, in a rat pleurisy model, and, third, as monitored by inhibition of the urinary excretion of LTE4 in antigen-challenged allergic sheep. Inhibition of antigen-induced bronchoconstriction by MK591 (free acid) is observed in inbred rats pretreated with methysergide, Ascaris-challenged squirrel monkeys, and Ascaris-challenged sheep (early and late phase response) [1]. Pups were treated with either vehicle or MK591 (free acid) 10, 20, or 40 mg/kg subcutaneously daily for days 1-4, 5-9, or 10-14. On day 14, the lungs were inflated, fixed, and stained for histopathological and morphometric analyses. Hyperoxia groups treated with MK-0591 (free acid) untreated hyperoxia groups showed definite evidence of aberrant alveolarization but no inflammation[2].