

## MK591 (free acid)

Catalog No: tcsc0953



### Available Sizes

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**Size:** 5mg

**Size:** 10mg

**Size:** 50mg

**Size:** 100mg



### Specifications

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**CAS No:**

136668-42-3

**Formula:**

$C_{34}H_{35}ClN_2O_3S$

**Pathway:**

Immunology/Inflammation

**Target:**

FLAP

**Purity / Grade:**

>98%

**Solubility:**

H<sub>2</sub>O :

**Alternative Names:**

Quiflapon

**Observed Molecular Weight:**

587.17

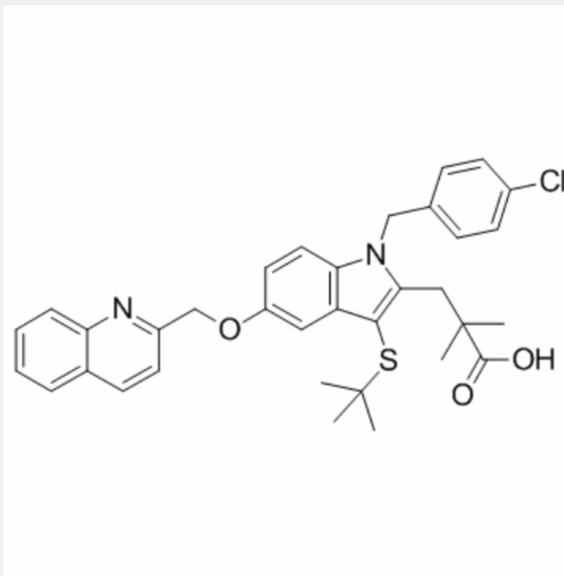
## Product Description

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)<sup>[1]</sup>.

**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<sup>[1]</sup>.

**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<sup>[2]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!