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Produktinformation

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- Diagnostik & molekulare Diagnostik
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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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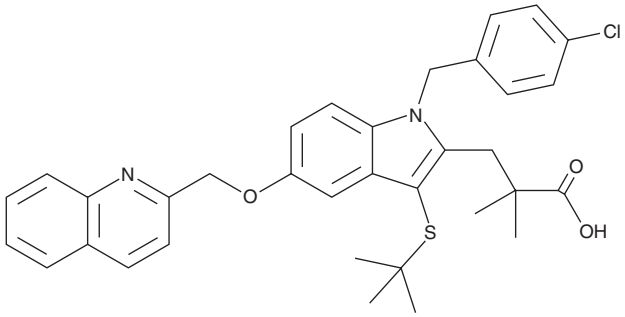
PRODUCT INFORMATION

MK-0591

Item No. 37322

CAS Registry No.: 136668-42-3
Formal Name: 1-[(4-chlorophenyl)methyl]-3-[(1,1-dimethylethyl) thio]-α,α-dimethyl-5-(2-quinolinylmethoxy)-1H-indole-2-propanoic acid
Synonyms: L-686,708, Quiflapon
MF: $C_{34}H_{35}ClN_2O_3S$
FW: 587.2
Purity: ≥98%
UV/Vis.: λ_{max}: 230 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

MK-0591 is supplied as a solid. A stock solution may be made by dissolving the MK-0591 in the solvent of choice, which should be purged with an inert gas. MK-0591 is soluble in the organic solvent DMSO at a concentration of approximately 50 mg/ml.

Description

MK-0591 is an inhibitor of 5-lipoxygenase-activating protein (FLAP; IC_{50} = 1.6 nM for the human enzyme).[1] It inhibits leukotriene B_4 (LTB_4; Item No. 20110) biosynthesis in isolated rat neutrophils stimulated with the calcium ionophore A23187 (Item No. 11016; IC_{50} = 6 nM) but does not inhibit 5-lipoxygenase (5-LO) in a cell-free assay (IC_{50} = > 4 µM for the rat enzyme). MK-0591 (0.3 and 1 mg/kg) prevents increases in airway resistance and decreases in dynamic compliance in *Ascaris* antigen-induced squirrel monkeys. It decreases proteinuria and reduces decreases in renal LTC_4 synthase activity in a rat model of glomerulonephritis induced by nephrotoxic rabbit serum when administered at a dose of 60 mg/kg.[2] MK-0591 (8 µM) also induces apoptosis in LNCaP prostate cancer cells.[3]

References

1. Brideau, C., Chan, C., Charleson, S., *et al.* Pharmacology of MK-0591 (3-[1-(4-chlorobenzyl)-3-(*t*-butylthio)-5-(quinolin-2-yl-methoxy)-indol-2-yl]-2,2-dimethyl propanoic acid), a potent, orally active leukotriene biosynthesis inhibitor. *Can. J. Physiol. Pharmacol.* **70(6)**, 799-807 (1992).
2. Petric, R., and Ford-Hutchinson, A. Inhibition of leukotriene biosynthesis improves renal function in experimental glomerulonephritis. *J. Lipid Mediat. Cell Signal* **11(3)**, 231-240 (1995).
3. Sarveswaran, S., Myers, C.E., and Ghosh, J. MK591, a leukotriene biosynthesis inhibitor, induces apoptosis in prostate cancer cells: Synergistic action with LY294002, an inhibitor of phosphatidylinositol 3'-kinase. *Cancer Lett.* **291(2)**, 167-176 (2010).

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