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

Lovastatin

Catalog No: tcsc1990

Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg

Size: 200mg

Specifications

CAS No:
75330-75-5

Formula:
$C_{24}H_{36}O_5$

Pathway:
Metabolic Enzyme/Protease

Target:
HMG-CoA Reductase (HMGCR)

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 215 mg/mL (531.47 mM)

Alternative Names:
Mevinolin

Observed Molecular Weight:
404.54

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Product Description

Lovastatin is a cell-permeable **HMG-CoA reductase** inhibitor used to lower cholesterol.

IC50 & Target: HMG-CoA reductase[1]

In Vitro: Lovastatin is an inactive lactone prodrug that must be chemically or enzymatically converted to its dihydroxy open-acid form in order to elicit inhibitory activity. Lovastatin in its hydroxy acid form is an exceptionally potent competitive inhibitor of liver HMG CoA reductase[1]. Lovastatin, other than its anticholesterol property, has diverse applications in the field of osteoporosis, neuro-degeneration, rheumatoid arthritis, antifungals and also is reported to reduce proliferation of lung cancer cells, breast cancer (MCF-7), liver cancer (HepG2). Lovastatin treatments show significant dose dependent cytotoxic effect on HeLa cells with IC_{50} value of 160 μg/mL. Lovastatin is effective to accelerate hydroxyl radical scavenging activity (54.06%) at an IC_{50} of 3601 μg/mL[2].

In Vivo: Lovastatin is an inactive lactone that is hydrolyzed in the liver to an active f3-hydroxyacid form. This principal metabolite is the inhibitor of the enzyme HMG-CoA reductase. The K_i is 1 nM. Lovastatin and its β-hydroxyacid metabolite are highly bound to human plasma proteins. Lovastatin crosses the blood-brain and placental barriers[3]. Lovastatin produces a profound reduction of apolipoprotein-B-containing lipoproteins, especially LDL cholesterol and, to a lesser extent, plasma triglycerides, and a small increase in HDL cholesterol[4].