Taiclone®
Quality Guarantee

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

Forskolin

Catalog No: tcsc1454

Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg

Size: 200mg

Size: 500mg

Size: 1g

Size: 2g

Specifications

CAS No:
66575-29-9

Formula:
$C_{22}H_{34}O_7$

Pathway:
GPCR/G Protein

Target:
Adenylate Cyclase

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 32 mg/mL (77.95 mM)

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Alternative Names:
Coleonol;Colforsin

Observed Molecular Weight:
410.5

Product Description

Forskolin is a potent **adenylate cyclase** activator, with binding ($\mathbf{IC_{50}}$=41 nM) to and activation ($\mathbf{EC_{50}}$=0.5 μM) of **type I adenylyl cyclase**.

IC50 & Target: IC50: 41 nM (Adenylyl cyclase)[1]

EC50: 0.5 μM (Adenylyl cyclase)[1]

In Vitro: Forskolin (Fsk) is a naturally occurring diterpene isolated from Coleus *forskholii*, directly activates adenylyl cyclase (AC) through its catalytic subunit to increase intracellular levels of cyclic adenosine monophosphate (cAMP)[1]. Forskolin (Fsk) affects the proliferation of the human T-cell lines such as Kit 225 and MT-2. Forskolin treatment inhibits the proliferation of both Kit 225 and MT-2 cells in a dose-dependent manner with an IC_{50} equal to ~5 μM Fsk. Forskolin treatment (10-100 μM) increases cAMPi levels ~5- to 20-fold above basal levels, which reache maximum levels between 50-100 μM Forskolin[2].

In Vivo: The Forskolin (Fsk)-treated $Mrp4^{-/-}$ mice shows an increased number of Ki67-positive and cleaved caspase 3-positive ECs, a significant decrease in the amount of pericyte coverage, and a reduced number of empty sleeves. In pups exposed to hyperoxia (75% oxygen) from P7 to P12, the $Mrp4^{-/-}$ mice shows a significant increase in the unvascularized retinal area[3]. The average blood glucose in the healthy rat group is 102.12±1.94 mg/dL, 101.25±3.56 for control group and 103±2.08 in forskolin group. The data shows that glucose levels at the end of the study are lower in forskolin group, with a significant difference according to the statistical tests applied (p=0.03)[4].