

# Forskolin

**Catalog No: tcsc1454**



## Available Sizes

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**Size:** 10mg

**Size:** 50mg

**Size:** 100mg

**Size:** 200mg

**Size:** 500mg

**Size:** 1g

**Size:** 2g



## Specifications

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**CAS No:**

66575-29-9

**Formula:**

$C_{22}H_{34}O_7$

**Pathway:**

GPCR/G Protein

**Target:**

Adenylate Cyclase

**Purity / Grade:**

>98%

**Solubility:**

DMSO :  $\geq 32$  mg/mL (77.95 mM)

**Alternative Names:**

Coleonol;Colforsin

**Observed Molecular Weight:**

410.5

**Product Description**

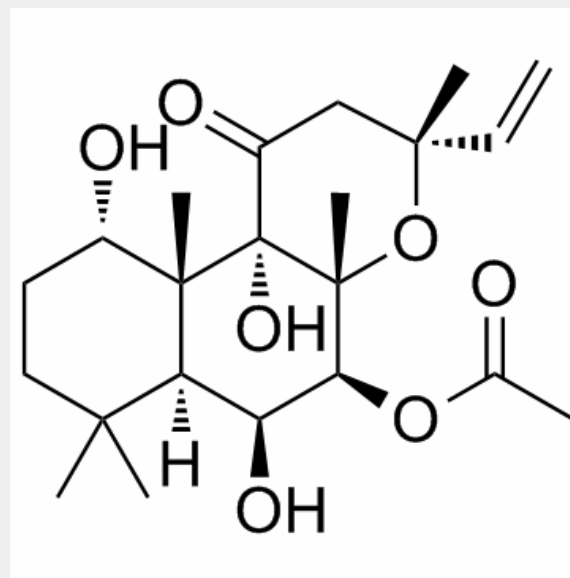
Forskolin is a potent **adenylate cyclase** activator, with binding (**IC<sub>50</sub>**=41 nM) to and activation (**EC<sub>50</sub>**=0.5 μM) of **type I adenylyl cyclase**.

IC50 & Target: IC50: 41 nM (Adenylyl cyclase)<sup>[1]</sup>

EC50: 0.5 μM (Adenylyl cyclase)<sup>[1]</sup>

**In Vitro:** Forskolin (Fsk) is a naturally occurring diterpene isolated from *Coleus forskohlii*, directly activates adenylyl cyclase (AC) through its catalytic subunit to increase intracellular levels of cyclic adenosine monophosphate (cAMP)<sup>[1]</sup>. 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<sub>50</sub> equal to ~5 μM Fsk. Forskolin treatment (10-100 μM) increases cAMPi levels ~5- to 20-fold above basal levels, which reach maximum levels between 50-100 μM Forskolin<sup>[2]</sup>.

**In Vivo:** The Forskolin (Fsk)-treated Mrp4<sup>-/-</sup> 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<sup>-/-</sup> mice shows a significant increase in the unvascularized retinal area<sup>[3]</sup>. 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)<sup>[4]</sup>.



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