

**Product Name:** Forskolin

**Catalog No.:** 1099

**Batch No.:** 4

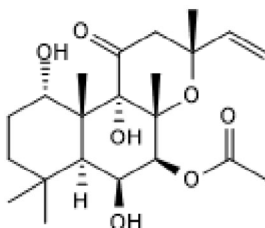
CAS Number: 66575-29-9

EC Number: 266-410-9

IUPAC Name: (3*R*,4*aR*,5*S*,6*S*,6*aS*,10*S*,10*aR*,10*bS*)-5-(Acetyloxy)-3-ethenyldodecahydro-6,10,10*b*-trihydroxy-3,4*a*,7,7,10*a*-pentamethyl-1*H*-naphtho[2,1-*b*]pyran-1-one

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>22</sub>H<sub>34</sub>O<sub>7</sub>  
**Batch Molecular Weight:** 410.51  
**Physical Appearance:** White solid  
**Solubility:** ethanol to 10 mM  
DMSO to 25 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 99.0% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

|             | Carbon | Hydrogen | Nitrogen |
|-------------|--------|----------|----------|
| Theoretical | 64.37  | 8.35     | 0        |
| Found       | 64.36  | 8.43     | 0        |

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

|                      |   |                     |             |          |
|----------------------|---|---------------------|-------------|----------|
| <b>Product Name:</b> | <b>Forskolin</b>  | <b>Catalog No.:</b> | <b>1099</b> | <b>4</b> |
| CAS Number:          | 66575-29-9  | EC Number:          | 266-410-9   |          |
| IUPAC Name:          | (3R,4aR,5S,6S,6aS,10S,10aR,10bS)-5-(Acetyloxy)-3-ethenyldodecahydro-6,10,10b-trihydroxy-3,4a,7,7,10a-pentamethyl-1H-naphtho[2,1-b]pyran-1-one |                     |             |          |

**Description:**

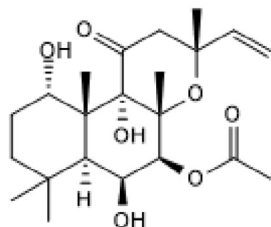
Forskolin, or coleonol, is a cell-permeable, potent, reversible and rapid activator of adenylyl cyclase, an enzyme that converts ATP to cAMP and pyrophosphate (EC<sub>50</sub> = 0.5 μM). In combination with 5 other compounds, forskolin enables chemical reprogramming of mouse embryonic fibroblasts to pluripotent stem cells, without genetic factors: Valproic acid, sodium salt (Cat. No. 2815), RepSox (Cat. No. 3742), Tranylcypromine hydrochloride (Cat. No. 3852), CHIR 99021 (Cat. No. 4423) and 3-Deazaneplanocin A hydrochloride (Cat. No. 4703). In combination with IBMX (Cat. No. 2845), forskolin induces neural differentiation of mesenchymal stem cells ... Please see product specific page on www.tocris.com for full description.

**Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>22</sub>H<sub>34</sub>O<sub>7</sub>  
 Batch Molecular Weight: 410.51  
 Physical Appearance: White solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**References:**

**Sato et al** (2015) SnapShot: Growing Organoids from Stem Cells. *Cell* **161** 1700. PMID: 26091044.  
**Hou et al** (2013) Pluripotent stem cells induced from mouse somatic cells by small-molecule compounds. *Science* **341** 651. PMID: 23868920.  
**Kim et al** (2005) cAMP induces neuronal differentiation of mesenchymal stem cells via activation of extracellular signal-regulated kinase/MAPK. *Neuroreport* **16** 1357. PMID: 16056139.

**Storage:** Store at -20°C

**Solubility & Usage Info:**

ethanol to 10 mM  
 DMSO to 25 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. \*Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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|--|---|--|---|--|
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|--|---|--|---|--|