

# Forskolin

✓ 10 mg

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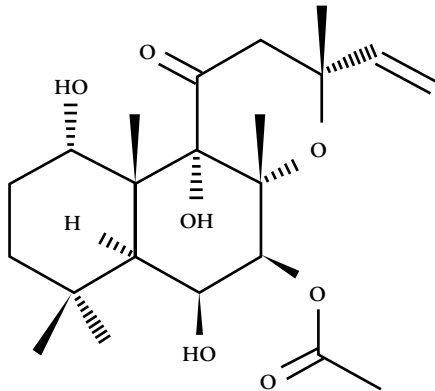
rev. 03/19/10

This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

**Background:** Forskolin, a naturally occurring diterpene from the Indian plant, *Coleus forskohlii*, activates adenylate cyclase, and thus increases the intracellular cAMP concentration (1). The second messenger cAMP activates cAMP-dependent protein kinase (PKA or cAPK) and controls many cellular mechanisms such as gene transcription, ion transport and protein phosphorylation (2).

Purity is >99% as determined by HPLC and TLC.

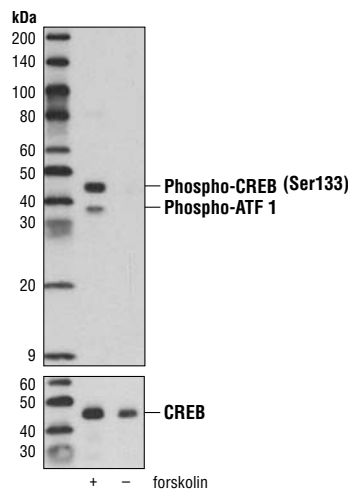
**Molecular Weight:** 410.5



**Molecular Formula:** C<sub>22</sub>H<sub>34</sub>O<sub>7</sub>

**Specificity/Sensitivity:** For 30 mM stock, reconstitute 10 mg in 812 µl DMSO. Store at -20°C.

**Directions for use:** Forskolin is soluble in DMSO and methanol. DMSO solutions can be stored at -20°C in the dark for at least six months.



Western blot analysis of extracts from SH-SY5Y cells, forskolin-treated (30 µM for 20 min.) or untreated, using Phospho-CREB (Ser133) Antibody #9191 (upper) or CREB Antibody #9192 (lower).

**Storage:** Supplied as lyophilized powder. Store -20°C.

**Background References:**

- (1) Laurenza, A. et al. (1989) *Trends Pharmacol Sci* 10, 442-7.
- (2) Montminy, M. (1997) *Annu Rev Biochem* 66, 807-22.

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide

**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine

Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

# Material Safety Data Sheet (MSDS) for Forskolin

## I. Identification:

**Product name:** Forskolin  
**Product Catalog:** 3828  
**Manufacturer Supplier:** Cell Signaling Technology  
 3 Trask Lane  
 Danvers, MA 01923 USA  
 978-867-2300 TEL  
 978-867-2400 FAX  
 978-578-6737 EMERGENCY TEL

## II. Composition/Information:

**Substance Name:** 7  $\beta$ -acetoxy-8, 13-epoxy-1a,6B,9a-trihydroxy-labd-14-en-11-one  
**Synonyms:** Colforsin  
**CAS#:** 66575-29-9  
**RTECS #:** QL6150000

## III. Hazard Identification:

**CAUTION:** This product is not for use in humans. To the best of our knowledge, the chemical, physical, and toxicological properties of this material have not been established.

**NFPA Rating:** Health: 1 Flammability: 0 Reactivity: 0

## IV. First Aid Measures:

**Inhalation:** If inhaled, remove to fresh air. If breathing is difficult, get medical attention.  
**Ingestion:** If swallowed, wash out mouth with water if or, provided that person is conscious. Get medical attention.

**Skin exposure:** In case of contact, immediately wash skin with soap and water for at least 15 minutes. Remove contaminated clothing. Wash clothing before reuse.

**Eye exposure:** In case of contact with eyes, immediately flush eyes with water for at least 15 minutes. Get medical attention.

## V. Fire Fighting Measures:

**Flash Point:** Data not available.

**Autoignition Temperature:** Data not available.

**Explosion:** Data not available.

**Fire extinguishing media:** Water spray, dry chemical, alcohol foam, or carbon dioxide.

**Firefighting:** Wear protective clothing and self-contained breathing apparatus to prevent contact with skin and eyes. May emit toxic fumes under fire conditions.

**VI. Accidental Release Measures:** Wear appropriate personal protective equipment as indicated in Section VIII. Sweep up material and avoid raising dust. Transfer to a closed chemical waste container for disposal. Wash spill site after material has been picked up for disposal.

## VII. Handling And Storage:

**Storage:** Store in tightly closed container at -20°C. Avoid inhalation. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.

## VIII. Exposure Controls/Personal:

**Ventilation System:** A system of local and/or general exhaust is required.

**Skin Protection:** Wear compatible chemical resistant gloves and protective clothing.

**Eye protection:** Wear chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

## IX. Physical And Chemical Properties

**Appearance:** powder  
**pH:** data not available  
**Melting Point:** data not available  
**Boiling Point:** data not available  
**Freezing Point:** data not available  
**Volatile Organic Compounds:** data not available  
**Solubility:** data not available

## X. Stability and Reactivity:

**Stability:** Protect from light and heat. Avoid strong acids and bases.

**Hazardous Decomposition:** Data not available.

## XI. Toxicological Information:

**Acute Effects:** Not established. May cause irritation if inhaled, ingested or absorbed.

**Chronic Effects:** Not established. May be harmful if inhaled, ingested or absorbed.

**Potential Health Effects:**

**Inhalation:** May be harmful, may be irritating to mucous membranes and upper respiratory tract.

**Skin:** May be harmful if absorbed through skin. May cause skin irritation.

**Eyes:** May be harmful if absorbed through the eyes. May cause eye irritation.

**Ingestion:** May be harmful if swallowed.

To the best of our knowledge, the chemical, physical, and toxicological properties of this material have not been established.

## XII. Ecological Information:

Data not available.

**XIII. Disposal Considerations:** Dispose of in accordance with federal, state, local environmental regulations.

## XIV. Transport Information:

**DOT: Proper Shipping Name:** This substance is considered non-hazardous for transport.

**IATA: Proper Shipping Name:** This substance is considered non-hazardous for air transport.

## XV. Regulatory Information:

**EU Regulations/Classifications/Labeling Information:** None.

**US Regulatory Information:** None.

**SARA Listed:** None.

**Canada (WHMIS):** DSL No, NDSL No.

## XVI. Other Information:

This compound is sold for research use only. It is not for use in humans. To the best of our knowledge, this document is accurate. It is intended to serve as a guide for safe use of this product in a laboratory setting by experienced personnel. The burden of safe use of this material rests entirely with the user. Cell Signaling Technology, Inc., shall not be held liable for any damage resulting from the handling of or from contact with the above product.