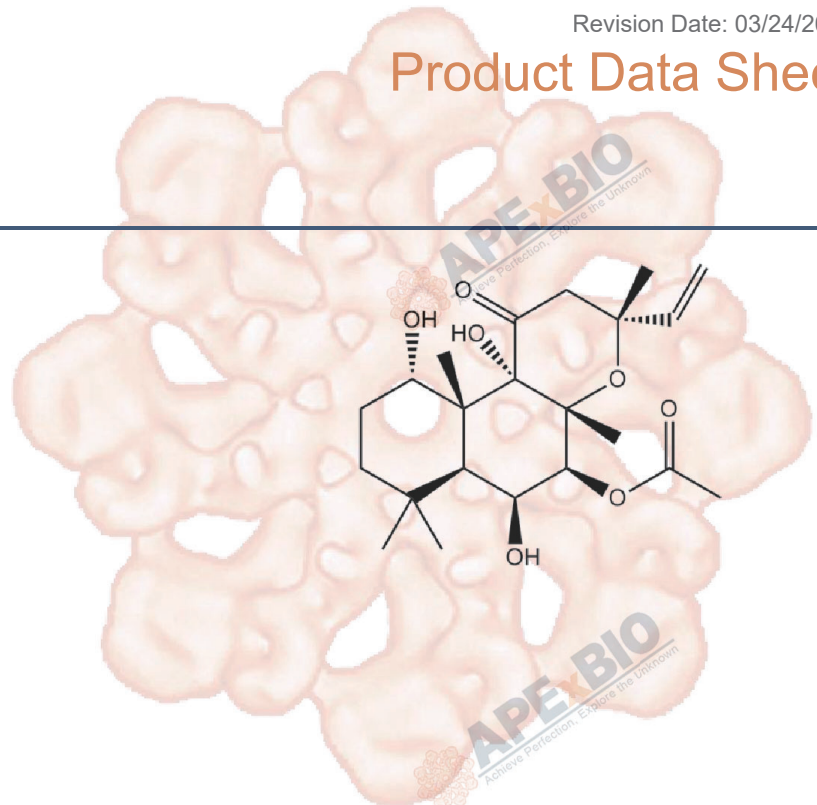


# Product Data Sheet

## Forskolin

<b>Cat. No.:</b>	B1421
<b>CAS No.:</b>	66575-29-9
<b>Formula:</b>	C <sub>22</sub> H <sub>34</sub> O <sub>7</sub>
<b>M.Wt:</b>	410.5
<b>Synonyms:</b>	
<b>Target:</b>	Others
<b>Pathway:</b>	Adenylate cyclase
<b>Storage:</b>	Store at -20°C



## Solvent & Solubility

insoluble in H<sub>2</sub>O; ≥13.43 mg/mL in EtOH; ≥20.53 mg/mL in DMSO

In Vitro	Preparing Stock Solutions	Mass			
		Solvent Concentration	1mg	5mg	10mg
		<b>1 mM</b>	2.4361 mL	12.1803 mL	24.3605 mL
		<b>5 mM</b>	0.4872 mL	2.4361 mL	4.8721 mL
		<b>10 mM</b>	0.2436 mL	1.2180 mL	2.4361 mL

Please refer to the solubility information to select the appropriate solvent

## Biological Activity

Shortsummary	adenylate cyclase activator	
IC <sub>50</sub> & Target		
In Vitro	<b>Cell Viability Assay</b>	
	Cell Line:	Human mesenchymal stem cells
	Preparation method:	The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	0.075-0.2 mM for 4 days or 7 days; or 10 μM	

	Applications:	Forskolin concentration-dependently decreased human mesenchymal stem cells proliferation after 4 days. Moreover, Forskolin increased alkaline phosphatase (ALP) expression of human mesenchymal stem cells in a dose-dependent manner. Additionally, Forskolin (10 $\mu$ M) significantly stimulated both vasopressin and oxytocin release from the rat hypothalamo-neurohypophysial (H-NH) system.
In Vivo	<b>Animal experiment</b>	
	Animal models:	Particles were implanted in subcutaneous pockets of nude male mice model
	Dosage form:	0.10 or 0.15mM Forskolin
	Applications:	Treatment with 0.10 mM Forskolin enhanced bone formation by human mesenchymal stromal cells in vivo.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

## Product Citations

1. Zhang H, Wen JJ, et al. "Forskolin reduces fat accumulation in Nile tilapia (*Oreochromis niloticus*) through stimulating lipolysis and beta-oxidation." *Comp Biochem Physiol A Mol Integr Physiol*. 2018 Dec 26;230:7-15. PMID:30593869
2. Morel JD, Paatero AO, et al. "Proteomics reveals scope of mycolactone-mediated Sec61 blockade and distinctive stress signature." *Mol Cell Proteomics*. 2018 Jun 18. pii: mcp.RA118.000824. PMID:29915147

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## References

1. Doorn, J., Siddappa, R., van Blitterswijk, C. A. and de Boer, J. (2012) Forskolin enhances in vivo bone formation by human mesenchymal stromal cells. *Tissue Eng Part A*. 18, 558-567
2. Roszczyk, M. and Juszczak, M. (2014) Forskolin-stimulated vasopressin and oxytocin release from the rat hypothalamo-neurohypophysial system in vitro is inhibited by melatonin. *Endokrynol Pol*. 65, 125-131

## Caution

**FOR RESEARCH PURPOSES ONLY.**

**NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

Specific storage and handling information for each product is indicated on the product datasheet. Most APEX BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.



## APExBIO Technology

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