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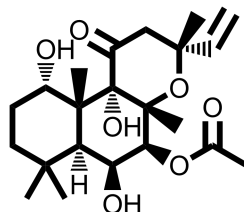
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Adenylyl Cyclase Activator Forskolin

Chemical Name: (3R,4aR,5S,6S,6aS,10S,10aR,10bS)-6,10,10b-trihydroxy-3,4a,7,7,10a-pentamethyl-1-oxo-3-vinyldodecahydro-1H-benzo[f]chromen-5-yl acetate



Molecular Weight:	410.50
Formula:	C ₂₂ H ₃₄ O ₇
Purity:	≥98%
CAS#:	66428-89-5
Solubility:	DMSO up to 100 mM
Storage	Powder: 4°C 1 year DMSO: 4°C 3 month -20°C 1 year

Biological Activity:

Forskolin is a small molecule activator of adenylate cyclase (EC₅₀~5-10 μM) in a rapid and reversible manner, to increase the intracellular levels of cAMP. Forskolin is used in many stem cell differentiation conditions, such as potentiating neuronal differentiation.

How to Use:

In vitro: Forskolin is used at 10-50 μM final concentration in cell cultures.

In vivo: Forskolin lowered blood pressure in hypertensive rats by 10 mg/kg oral dosing once per day.

Reference:

1. Kenneth Seamon, et al. Forskolin: Unique diterpene activator of adenylate cyclase in membranes and in intact cells. (1981) PNAS Vol. 78, No. 6, pp. 3363-3367.
2. Hedin L. et al. Forskolin effects on the cAMP system and steroidogenesis in the immature rat ovary. (1983) Mol Cell Endocrinol 33: 69-80.
3. Kilmer SL, et al. Forskolin activation of adenylate cyclase in vivo stimulates nerve regeneration. (1984) Nature. 307(5950):455-7.
4. Son H. et al. Pairing of forskolin and KCl increases differentiation of immortalized hippocampal neurons in a CREB Serine 133 phosphorylation-dependent and extracellular-regulated protein kinase-independent manner. (2001) Neurosci Lett 308: 37-40.

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