Product Specification Sheet

Product Name
Stemolecule™ Forskolin

Description
Stemolecule Forskolin is a natural compound produced by the Indian Coleus plant (*Coleus forskohlii*). It is used in several differentiation protocols for its ability to potentiate neuron differentiation. Forskolin is able to stimulate adenylate cyclase activity and increases cyclic AMP. Cyclic AMP is a signaling molecule and key regulator of critical enzymes in cellular processes. For example, cAMP can bind to protein kinase A (PKA) regulatory subunit and activate PKA which acts as a negative regulator of the hedgehog signaling pathway.

Catalog Number
04-0025

Size
10 mg

Alternate Name
[(3R,4aR,5S,6S,6aS,10S,10aR,10bS)-3-ethenyl-6,10,10b-trihydroxy-3,4a,7,7,10a-pentamethyl-1-oxo-5,6,6a,8,9,10-hexahydro-2H-benzo[f]chromen-5-yl]acetate

Chemical Formula
C_{22}H_{34}O_{7}

Structure

Molecular Weight
410.50

CAS Number
66428-89-5

Purity
Greater than 97% by HPLC analysis

Formulation
White crystalline powder

Solubility
For a 10 mM concentrated stock solution of Forskolin, reconstitute the compound by adding 2.44 ml of DMSO to the entire contents of the vial. If precipitate is observed, warm the solution to 37°C for 2 to 5 minutes. For cell culture, the media should be prewarmed prior to adding the reconstituted compound. Note: for most cells, the maximum tolerance to DMSO is less than 0.5%. This molecule is soluble in DMSO at 100 mM.

Storage and Stability
Store powder at 4°C protected from light. Following reconstitution, store aliquots at -20°C. Stock solutions are stable for 6 months when stored as directed.

Quality Control
The purity of Forskolin was determined by HPLC analysis. The accurate mass was determined by mass spectrometry. Cellular toxicity of Forskolin was tested on mouse embryonic stem cells.
References


