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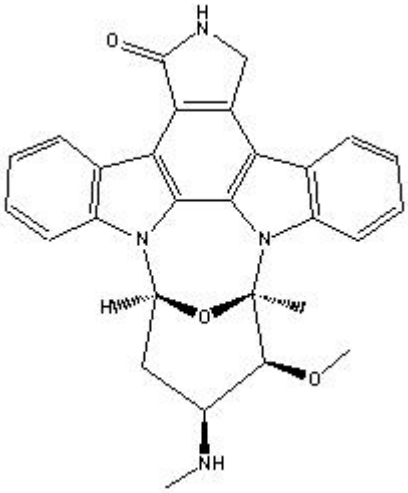
TECHNICAL INFORMATION

Catalog Number: 191400, 194805
Staurosporine

Structure:



Molecular Formula: $C_{28}H_{26}N_4O_3$
Molecular Weight: 466.50
CAS # 62996-74-1
Source: *Streptomyces* species
Stability: Stock Solution in DMSO is stable for approximately 6 months if stored at 2-8°C.
Physical Appearance: White to off white powder
Description: Cell-permeable; found to inhibit phospolipid/Ca^{2+} dependent and cyclic nucleotide dependent protein kinases. A potent protein kinase inhibitor useful as a tool for studies on protein phosphorylation in the regulation of cellular functions. Also inhibits platelet aggregation induced by collagen or ADP but has no effect on thrombin-induced platelet aggregation. Induces apoptosis in human malignant glioma cell lines. Arrests normal cells in the G1 checkpoint.
Staurosporine isolated from *Streptomyces sp*., is the most potent protein kinase inhibitor, inhibiting the catalytic domain of protein kinases, including protein kinase C.
Staurosporine can cross cell membranes in 0.5 to 2.0 hours and has been shown to function in both plant and mammalian systems.
Solubility: Staurosporine is provided in a lyophilised form. It may be reconstituted by dissolving the lyophilized reagent in DMSO (5 mg/ml-clear, colorless solution), DMF, ethyl acetate (5 mg/ ml-clear colorless solution) or methanol. Stock solutions should be further diluted with aqueous buffers just prior to use. Stability depends upon the quality of solvent used. The compound should be stored at -20ºC in the dark.

	Ki (mM)	**IC_{50} (mM)**
Protein Kinase C	0.0007	0.0027[2]
c-AMP-dep. Protein Kinase	0.0070	0.0054[2]
c-GMP-dep. Protein Kinase	0.0085	0.0085[31]
Myosin Light Chain Kinase	0.0013	0.0019[24]
$p60^{v\text{-}src}$ Protein Tyrosine Kinase	-	0.0064[5]
CaM-Kinase II	-	0.0200[23]
Cardiolipin - and protease- activated protein kinase	-	0.030[26]

Protein Kinase C subtypes	IC_{50} (mM)
Protein Kinase C alpha	0.003[30]
Protein Kinase C beta-1	0.009[30]
Protein Kinase C beta-2	0.003[30]
Protein Kinase C gamma	0.004[30]
Protein Kinase C delta	0.027[30]
Protein Kinase C epsilon	0.049[30]
Protein Kinase C zeta	1.290[30]
Protein Kinase C eta	0.010[30]

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