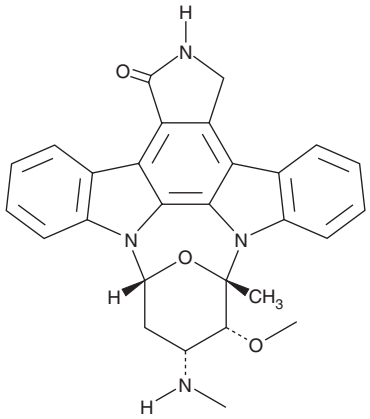
PRODUCT INFORMATION

Staurosporine

Item No. 81590



CAS Registry No.:	62996-74-1
Formal Name:	2,3,10,11,12,13-hexahydro-10R-methoxy-9S-methyl-11R-methylamino-9S,13R-epoxy-1H,9H-diindolo[1,2,3-gh;3',2',1'-lm]pyrrolo[3,4-j][1,7]benzodiazonin-1-one
Synonym:	Stsp
MF:	$C_{28}H_{26}N_4O_3$
FW:	466.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 241, 295, 337, 355, 373 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Staurosporine is supplied as a solid. A stock solution may be made by dissolving the staurosporine in the solvent of choice, which should be purged with an inert gas. Staurosporine is soluble in organic solvents such as methanol and DMSO. The solubility of staurosporine in these solvents is approximately 2 mg/ml and 500 µg/ml, respectively.

Description

Stsp is potent inhibitor of protein kinase C (PKC) from rat brain, exhibiting an IC_{50} value of 2.7 nM.[1] It inhibits rat recombinant PKC-α approximately 100- and 1,000-fold better than PKC-δ and PKC-ζ, respectively.[2] However, Stsp is non-selective in that it also inhibits the activity of a variety of other protein kinases, not only PKC isoforms.[3] The biological effects of Stsp include cytotoxicity, relaxation of smooth muscle, and regulation of eNOS gene expression.[3,4]

References

1. Tamaoki, T., Nomoto, H., Takahashi, I., *et al.* Staurosporine, a potent inhibitor of phospholipid/Ca^{++} dependent protein kinase. *Biochem. Biophys. Res. Commun.* **135(2)**, 397-402 (1986).
2. McGlynn, E., Liebetanz, J., Reutener, S., *et al.* Expression and partial characterization of rat protein kinase C-δ and protein kinase C-ζ in insect cells using recombinant baculovirus. *J. Cell. Biochem.* **49(3)**, 239-250 (1992).
3. Ruegg, U.T. and Burgess, G.M. Staurosporine, K-252 and UCN-01: Potent but nonspecific inhibitors of protein kinases. *Trends Pharmacol. Sci.* **10(6)**, 218-220 (1989).
4. Li, H. and Förstermann, U. Structure-activity relationship of staurosporine analogs in regulating expression of endothelial nitric-oxide synthase gene. *Mol. Pharmacol.* **57(3)**, 427-35 (1999).

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