

Product Datasheet

Staurosporine (orb1224413)

Catalog Number	orb1224413
Category	Small Molecules
Description	<p>Staurosporine is a potent PKC inhibitor for PKCα, PKCγ and PKCη with IC₅₀ of 2 nM, 5 nM and 4 nM, less potent to PKCδ (20 nM), PKCϵ (73 nM) and little active to PKCζ (1086 nM). Phase 3.(In Vitro):Staurosporine, widely used as a protein kinase C (PKC) inhibitor with a broad spectrum of activity, is an alkaloid isolated from the culture broth of Streptomyces staurospores. MC3T3E-1 osteoblasts, expose to Staurosporine (100 nM) for 12 h, release an amount of LDH (12.4\pm3.1%) that is similar to that release by the control cells(10.0\pm2.4%), indicating the relative absence of lytic death, which occurs in necrosis. In addition, treatment with Staurosporine (100 nM) results in morphological changes, characteristic of apoptosis: a brightblue fluorescent condensed nuclei seen through a fluorescence microscope after Hoechst 33258-staining, and a reduction of cell volume.\n(In Vivo):The inhibitory effect of Staurosporine is statistically significant at around Wk 10 of tumor promotion. Although statistically significant inhibition is not obtained with 10 ng of Staurosporine in later weeks of the experiment, a decreasing tendency in the percentages of tumor bearing mice and in average numbers of tumors per mouse is apparent. Thus, Staurosporine slightly inhibits tumor promotion of Teleocidin, even at the dose at which Staurosporine itself induced tumors. Staurospone (0.05 and 0.1 mg/kg intraperitoneal) attenuates the impaired performance of water maze and passive avoidance tasks, even though the drug administration began 2 weeks after the lesion. Moreover, Staurosporine (0.1 mg/kg) partially reversed the decrease of choline acetyltransferase activity in the fronto-parietal cortex induced by basal forebrain-lesion. These results suggest that Staurosporine attenuates impairment of learning through reversal of damage to cholinergic neurons induced by basal forebrain-lesion.</p>
Target	PKC
Purity	>98% (HPLC)
MW	466.53

Biorbyt Ltd.

7 Signet Court, Swann Road
Cambridge
CB5 8LA
United Kingdom

Email: info@biorbyt.com, support@biorbyt.com
Phone: [+44 \(0\)1223 859353](tel:+44(0)1223859353) | Fax: [+1 \(415\) 651-8558](tel:+1(415)651-8558)

Biorbyt LLC

68 TW Alexander Drive
Research Triangle Park
Durham
NC 27713
United States

Email: info@biorbyt.com, support@biorbyt.com
Phone: [+1 \(415\) 906-5211](tel:+1(415)906-5211) | Fax: [+1 \(415\) 651-8558](tel:+1(415)651-8558)

Target Areas	PKC PKC α PKC γ PKC η c-Fgr
Solubility (25°C)	DMSO:4 mg/mL (8.57 mM); Ethanol:1 mg/mL (1 mM); Water:1 mg/mL (1 mM)
CAS Number	62996-74-1
Formula	C ₂₈ H ₂₆ N ₄ O ₃
SMILES	CO[C@@H]1[C@@H](C[C@@H]2N3C4=C(N(C5=CC=CC=C56)[C@@]1(C)O2)C6=C7CNC(C7=C4C8=CC=CC=C83)=O)NC
Chemical Name	(5S,6R,7R,9R)-6-methoxy-5-methyl-7-(methylamino)-6,7,8,9,15,16-hexahydro-5H,14H-17-oxa-4b,9a,15-triaza-5,9-methanodibenzo[b,h]cyclonona[jkl]cyclopenta[e]-as-indacen-14-one
Storage	Storage temperature: -20°C. Stability: \geq 2 years
Note	For research use only
Expiration Date	12 months from date of receipt.

Biorbyt Ltd.

7 Signet Court, Swann Road
Cambridge
CB5 8LA
United Kingdom

Email: info@biorbyt.com, support@biorbyt.com

Phone: [+44 \(0\)1223 859353](tel:+44(0)1223859353) | Fax: [+1 \(415\) 651-8558](tel:+1(415)651-8558)

Biorbyt LLC

68 TW Alexander Drive
Research Triangle Park
Durham
NC 27713
United States

Email: info@biorbyt.com, support@biorbyt.com

Phone: [+1 \(415\) 906-5211](tel:+1(415)906-5211) | Fax: [+1 \(415\) 651-8558](tel:+1(415)651-8558)