

# Staurosporine

Apoptosis inducer. Protein kinase inhibitor.

Staurosporine is the reference agent for apoptosis induction (1  $\mu$ M in CHO cells). Staurosporine binds to the ATP binding site and inhibits a variety of protein kinases including protein kinase C (PKC), CDK1/cyclin B ( $IC_{50}$  ~5nM), CDK2/cyclin A ( $IC_{50}$ =7nM), CDK4/cyclin D ( $IC_{50}$ =3-10  $\mu$ M), CDK5/p25 ( $IC_{50}$ =4nM), GSK-3 $\beta$  ( $IC_{50}$ =15nM), and Pim-1 kinase ( $IC_{50}$ =10nM). Staurosporine does not inhibit PKC- $\zeta$ . Staurosporine also inhibits topoisomerase II directly by blocking transfer of phosphodiester bonds from DNA to active site tyrosine. Other than apoptosis and cytotoxicity, some of the biological effects of staurosporine include regulation of eNOS gene expression and relaxation of smooth muscles.

Citations: 112

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## Ordering Information

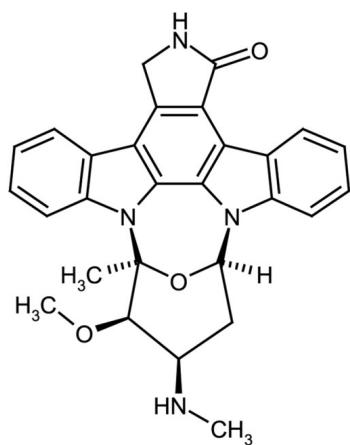
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ALX-380-014-M001	1mg
ALX-380-014-M005	5mg
ALX-380-014-C250	250 $\mu$ g

## Manuals, SDS & CofA

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- Model apoptosis inducer
- Potent cell-permeable inhibitor of protein kinases
- Highly cited



## Handling & Storage

Use/Stability	As indicated on product label or CoA when stored as recommended. Stable for at least 2 years after receipt when stored +4°C.
Handling	Protect from light and moisture. Store under inert gas.
Long Term Storage	+4°C
Shipping	Ambient Temperature

## Regulatory Status

RUO - Research Use Only

## Product Details

Alternative Name	Antibiotic AM-2282
Appearance	Off-white to green powder.
CAS	62996-74-1
Couple Target	CDK, MLCK, PKC, Topoisomerase
Couple Type	Inhibitor
Formula	$C_{28}H_{26}N_4O_3$
MI	14: 8802
MW	466.5
Purity	≥99% (HPLC)
RTECS	KC655000
Solubility	Soluble in DMF (25mg/ml), DMSO (25mg/ml), or ethyl acetate. Only slightly soluble in chloroform and methanol. Insoluble in water.
Source	Isolated from <i>Streptomyces staurosporeus</i> .



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