Staurosporine

Potent and cell-permeable inhibitor of a wide variety of protein kinases

**Product Description**

**Name:** Staurosporine  
Synonyms: antibiotic AM-2282,  
Staurosporine from Streptomyces staurosporeus  
FP-74146E  
1 mg  

**Catalog Number:**  
FP-74146E  
1 mg  

**Structure:**  
C_{28}H_{26}N_{4}O_{3}  
CAS [62996-74-1]  

**Molecular Weight:**  
MW= 466.53  

**Melting point:**  
270°C  

**Purity:**  
>99%  

**Solubility:**  
Soluble in DMSO at 100 mg/mL; soluble in ethanol at 2.5 mg/mL with warming; very poorly soluble in water; maximum solubility in plain water is estimated to be about 10-20 µM; buffers, serum, or other additives may increase or decrease the aqueous solubility.  

**Storage:** below -20 ºC  

**Technical information**

- **Biological activity**
  
The staurosporine, isolated from *Streptomyces staurosporeus* is one of the most potent and widely used inhibitors of protein kinases. It is a potent inhibitor of protein kinase C (IC50 = 0.7 nM), but also protein kinase A (IC50 = 7-15 nM), and protein kinase G (IC50 = 8.5 nM).

Other sources indicate for Protein Kinase C (IC_{50} = 5 nM), PKA (IC50 = 15 nM), PKG (18 nM), CaMKII (20 nM), S6K (5 nM), MLCK (21 nM), SRC (6 nM), FGR (2 nM), LYN (20 nM) and SYK (16 nM).

In contrast it has a relatively low potency for ERK1 (1.5 µM), CSK (2 µM), IGF-IR (6.2 µM), CK2 (19.5 µM) and CK1 (>100µM).

It is cell permeable.
Staurosporine induces apoptosis in human neuroblastoma cell lines and chick embryonic neurons.

**Typical specifications:**
- **FORM:** Powder to crystalline solid or solid film at bottom of vial
- **COLOR:** White to off-white to light yellow
- **PURITY by HPLC:** >99%
- **PURITY by TLC:** >99%

**Elemental Analysis:**

<table>
<thead>
<tr>
<th>Element</th>
<th>Calculated</th>
<th>Found</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>71.35%</td>
<td>71.29%</td>
</tr>
<tr>
<td>H</td>
<td>6.36%</td>
<td>6.29%</td>
</tr>
<tr>
<td>N</td>
<td>10.40%</td>
<td>10.37%</td>
</tr>
</tbody>
</table>

**Guidelines for use**

- **Protocols**
  Protocol may be found in the literature.

- **Handling:**
  Toxic. May be carcinogenic. Wear gloves and mask when handling product. Protect from light.

**References**


**Related products**

- Protease inhibitors, WT0900
- Kinases substrates
- Live/Dead Mammalian Viability/Cytotoxicity Assay Kit, BF4710
- Caspase 8 Assay, BG4512

**Ordering information**

Catalog size quantities and prices may be found at [http://www.interchim.com](http://www.interchim.com). Please inquire for higher quantities (availability, shipment conditions).

For any information, please ask: FluoProbes® / Interchim; Hotline: +33(0)4 70 03 73 06

**Disclaimer**: Materials from FluoProbes® are sold for research use only, and are not intended for food, drug, household, or cosmetic use. EFluoProbes® is not liable for any damage resulting from handling or contact with this product.