# Specification

**Staurosporine BioChemica**

<table>
<thead>
<tr>
<th><strong>Synonym</strong></th>
<th>Antibiotic AM-2282</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>state of matter</strong></td>
<td>Solid</td>
</tr>
<tr>
<td><strong>origin</strong></td>
<td>from <em>Streptomyces staurosporeus</em></td>
</tr>
<tr>
<td><strong>Formula</strong></td>
<td>C_{28}H_{26}N_{4}O_{3}</td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>466.53 g/mol</td>
</tr>
<tr>
<td><strong>CAS-No.:</strong></td>
<td>62996-74-1</td>
</tr>
<tr>
<td><strong>HS-No.:</strong></td>
<td>29419000</td>
</tr>
<tr>
<td><strong>Storage:</strong></td>
<td>2-8°C protected from light</td>
</tr>
<tr>
<td><strong>LGK:</strong></td>
<td>6.1 D</td>
</tr>
</tbody>
</table>

**Hazard pictogram(s)**

![Hazard pictogram](image)

**Hazard statement(s)**

H350

**Precautionary statement(s)**

P201-P308+P313

**Signal word**

Danger

**WGK:**

3

**Specification**

**Assay (HPLC)**

min. 97 %

**λ_{max.} (MeOH)**

208, 241, 292, 334, 355, 373 nm

**Solubility (5 mg/ml EtOAc)**

clear, colorless

---

**AppliChem GmbH**

Ottoweg 4  •  D-64291 Darmstadt  •  Phone +49 6151 9357 0  •  Fax +49 6151 9357 11  •  info.de@itwreagents.com  •  www.itwreagents.com

CEO Joan Roget  •  Commerzbank Darmstadt  •  Bank 508 800 50  •  Account 0186989900

IBAN DE24 5088 0050 0186 9899 00  •  Swiftcode DRESDEFF508  •  Finanzamt Darmstadt 07 228 16476  •  Register court Darmstadt HRB Nr. 7340
Specification

Staurosporine BioChemica

A7626

Literature


Comment

Originally, Staurosporine was isolated from Streptomyces staurosporeus. It has antifungal but not antibacterial properties. In the meantime, a variety of structurally related alkaloids (indolcarbazoles) could be isolated, binding to the ATP-binding site in enzymes. Staurosporine is cell-permeable and inhibits several kinases at very low concentrations (PKC $K_i$ 0.7 nM; PKA $K_i$ 7 nM; MLCK $K_i$ 1.3 nM; according to ref. 1). The large number of targets explains the different, in some cases cell-type specific, physiological effects: e.g. Induction of apoptosis, Ca$^{2+}$ release, Phospholipase D activation or activation of genes. In addition, Topoisomerase II is inhibited by blocking of the transfer of the phosphodiester binding of ATP to the tyrosine in the active center.

Solubility and stability: Staurosporine is soluble in DMSO, methanol or ethanol, but not in water. Stock solutions may be prepared with a concentration of 1 mM and are stored at -20°C, protected from light. Solutions are stable for at least 6 months. The working concentration may vary between 10 to 200 nM.