Staurosporine
PRODUCT ANALYSIS SHEET

Catalog Number: PHZ1271
Lot Number: See product label
Quantity: 100 µg
Appearance: Lyophilized solid
Molecular Formula: \(C_{28}H_{26}N_{4}O_{3}\)
Molecular Weight: 466.5
Purity: 99%, as assessed by TLC

Summary: Staurosporine inhibits a variety of kinases including PKA, PKG, MLCK, CaMK, tyrosine kinases, and phosphorylase kinase. This compound displays selectivity toward the PKC isoforms, inhibiting PKCa, PKCb, PKCγ, PKCd, and PKCe, but not PKCE, and induces PKC translocation. Staurosporine also inhibits topoisomerase II directly by interaction with the ATP binding site, augments PMA-induced ornithine decarboxylase, and activates a bcl-2-regulated apoptosis pathway.

Biological Activity:
- \(\text{CaMK: IC}_{50} = 20 \text{nM}\)
- \(\text{MLCK: } K_i = 1.3 \text{nM}\)
- \(\text{phosphorylase kinase: IC}_{50} = 0.5 \text{nM}\)
- \(\text{PKA: } K_i = 7.0 \text{nM}\)
- \(\text{PKG: } K_i = 8.5 \text{nM}\)
- \(\text{PKC: IC}_{50} = 0.7 \text{nM}\)
- \(\text{PKC}_{\alpha}: IC_{50} = 58 \text{nM}\)
- \(\text{PKC}_{\beta}: IC_{50} = 65 \text{nM}\)
- \(\text{PKC}_{\gamma}: IC_{50} = 49 \text{nM}\)
- \(\text{PKC}_{\delta}: IC_{50} = 325 \text{nM}\)
- \(\text{PKC}_{\varepsilon}: IC_{50} = 160 \text{nM}\)

Solubility: Soluble in DMSO at a concentration of 25 mg/mL and DMF at a concentration of 25 mg/mL.

Storage: Store, as supplied, at 2-8°C. Upon solubilization, apportion into working aliquots and store at –20°C. Avoid repeated freeze/thaw cycles. Solutions are stable at –20°C for up to three months.

Expiration Date: Expires one year from date of receipt when stored as instructed.

Related Products:
- \(\text{ERK1&2 [pT}^{185/187}\text{]}\) antibody, Cat. # 44-680G
- \(\text{Tau [pS}^{214}\text{]}\) antibody, Cat. # 44-742G
- \(\text{Akt/PKB [pS}^{472}\text{]}\) antibody, Cat. # 44-622G
- \(\text{Tau [pS}^{356}\text{]}\) antibody, Cat. # 44-751G
- \(\text{PKC}_{\delta} [pY}^{311}\text{]}\) (mouse) antibody, Cat. # 44-950
- \(\text{Tau [pT}^{217}\text{]}\) antibody, Cat. # 44-740G
- \(\text{Tau [pS}^{399}\text{]}\) antibody, Cat. # 44-760G

Caution: Avoid contact with eyes, skin, and mucous membranes. Wear protective clothing when handling this product. Not for human use.

References:

For research use only. CAUTION: Not intended for human or animal therapeutic or diagnostic use.

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