Molecular Formula:

$C_{28}H_{26}N_4O_3$

Molecular Weight:

466.53 g/mol

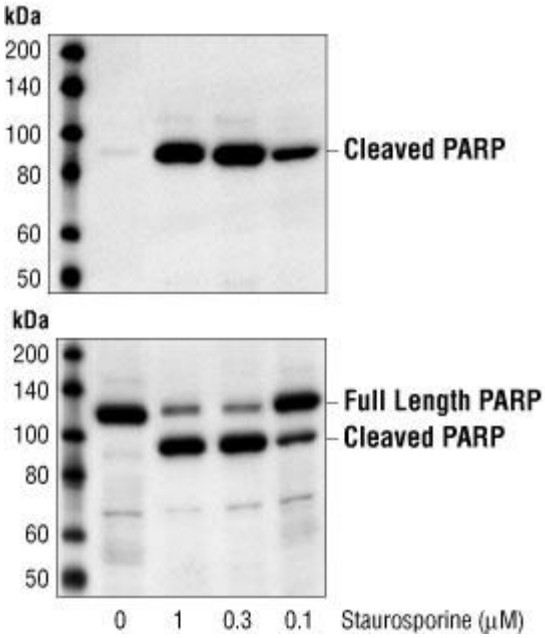
Purity:

>99%

Directions for Use

Dissolve the lyophilized alkaloid in DMSO or Methanol. For a 1 mM solution, dissolve in 0.536 mL.

Western Blotting



Western blot analysis of extracts from HeLa cells, untreated or Staurosporine-treated (3 hours), showing PARP cleavage as evidence of induction of apoptosis, using Cleaved PARP Antibody #9541 (upper) or PARP Antibody #9542 (lower).

Background

Staurosporine is an alkaloid isolated from the culture broth of Streptomyces staurosporesa. It is a potent, cell permeable protein kinase C inhibitor with an IC50 of 0.7 nM. At higher concentration (1-20 nM), staurosporine also inhibits other kinases such as PKA, PKG, CAMKII and Myosin light chain kinase (MLCK) (1). At 50-100 nM, it is a functional neurotrophin agonist, promoting neurite outgrowth in neuroblastoma, pheochromocytoma and brain primary neuronal cultures. At 0.2- 1 μM, staurosporine induces cell apoptosis (2,3).

1. Ruegg, U.T. and Burgess, G.M. (1989) *Trends Pharmacol. Sci.* 10, 218-220.

2. Couldwell , W. T. et al. (1994) *FEBS Lett.* 345, 43-46.

3. Yue, T. L. et al. (1998) *J. Mol. Cell. Cardiol.* 30, 495-507.