Revision 3

Store at -20C

#9493

PKC412

Cell Signaling TECHNOLOGY®

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Background

The staurosporine analog, PKC412, inhibits a variety of serine/threonine and tyrosine kinases including PKC (IC_{50} = 50 nM), cyclic AMP-dependent protein kinase (IC_{50} = 2.4 µM), S6 kinase (IC_{50} = 5.0 µM), and EGFR (epidermal growth factor receptor) tyrosine kinase activity (IC_{50} = 3.0 µM) (1). PKC412 has also demonstrated stong inhibitory effects on FLT3, which causes G1 cell cycle arrest and apoptosis (2).

Molecular Formula

$C_{35}H_{30}N_4O_4$

Molecular Weight

570.64 g/mol

Purity

>99%

CAS

120685-11-2

Solubility

Soluble in DMSO at 100mg/ml and EtOH at 5mg/ml.

Storage

Store lyophilized or in solution at -20°C, desiccated. Protect from light. In lyophilized form, the chemical is stable for 24 months. Once in solution, use within 3 months to prevent loss of potency. Aliquot to avoid multiple freeze/thaw cycles.

Directions for Use

PKC412 is supplied as a lyophilized powder. For a 10 mM stock, reconstitute 1 mg in 175.24 µL DMSO. Working concentrations and length of treatment can vary depending on the desired effect, but it is typically used at 0.1-10 µM for 18-48 hours. Soluble in DMSO at 100 mg/mL; soluble in ethanol at 5 mg/mL with warming; very poorly soluble in water with maximum solubility estimated to be about 10-20 µM.

Background References

1. Meyer, T. et al. (1989) *Int J Cancer* 43, 851-6.
2. Bali, P. et al. (2004) *Clin Cancer Res* 10, 4991-7.

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Limited Uses