

PKC412



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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 strong inhibitory effects on FLT3, which causes G1 cell cycle arrest and apoptosis (2).
Molecular Formula	C ₃₅ H ₃₀ N ₄ O 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	<ol style="list-style-type: none"> 1. Meyer, T. et al. (1989) <i>Int J Cancer</i> 43, 851-6. 2. Bali, P. et al. (2004) <i>Clin Cancer Res</i> 10, 4991-7.

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