Web: www.taiclone.com
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# Midostaurin

## Catalog No: tcsc3331

### Available Sizes

**Size:** 1mg

**Size:** 5mg

**Size:** 10mg

**Size:** 50mg

**Size:** 100mg

### Specifications

**CAS No:**
120685-11-2

**Formula:**
$C_{35}H_{30}N_4O_4$

**Pathway:**
TGF-beta/Smad;Epigenetics

**Target:**
PKC;PKC

**Purity / Grade:**
>98%

**Solubility:**
DMSO : 62.5 mg/mL (109.53 mM; Need ultrasonic); H2O :

**Alternative Names:**
CGP41231;PKC412;CGP 41251

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**Observed Molecular Weight:**
570.64

## Product Description

Midostaurin (CGP41231; PKC412) is a multi-targeted protein kinase inhibitor which inhibits PKCα/β/γ, Syk, Flk-1, Akt, PKA, c-Kit, c-Fgr, c-Src, FLT3, PDFRβ and VEGFR1/2 with **$IC_{50}$** ranging from 16-500 nM.

IC50 & Target: IC50: 22 nM (cPKC-α), 30 nM (cPKC-β1), 31 nM (cPKC-β2), 24 nM (cPKC-γ), 330 nM (nPKC-δ), 160 nM (nPKC-η), 1.25 μM (nPKC-ε), 465 μM (aPKC-ζ), 38 nM (PPK), 570 nM (Protein kinase A), 95 nM (c-Syk), 86 nM (KDR), 912 nM (Flt-1), 1.90 μM (Myosin-light chain kinase)[5]

***In Vitro:*** Midostaurin (PKC412) shows a broad antiproliferative activity against various tumor and normal cell lines in vitro, and is able to reverse the Pgp-mediated multidrug resistance of tumor cells in vitro. Exposure of cells to Midostaurin (PKC412) results in a dose-dependent increase in the G2/M phase of the cell cycle concomitant with increased polyploidy, apoptosis and enhanced sensitivity to ionizing radiation[1]. Midostaurin (PKC412) with ponatinib induced substantial inhibition of KIT-, Lyn-, and STAT5 activity, but did not suppress Btk in HMC-1 cells and primary neoplastic mast cells[2]. Midostaurin (PKC412) inhibits EN fusion tyrosine kinase in hematopoietic Ba/F3 cells. Midostaurin (PKC412) significantly inhibits EN phosphorylation in M0-91 and IMS-M2 cells in a dose-dependent manner[3].

***In Vivo:*** Midostaurin (PKC412) strongly inhibits retinal neovascularization as well as laser-induced choroidal neovascularization in murine models[1]. Midostaurin (PKC412) (25 mg/kg, i.p.) protects mouse livers of the K18 Arg90Cys-overexpressing transgenic mice from Fas-induced apoptosis[4].