

# Ro 31-8220 (mesylate)

Catalog No: tcsc1677



## Available Sizes

**Size:** 10mg

**Size:** 50mg



## Specifications

**CAS No:**

138489-18-6

**Formula:**

$C_{26}H_{27}N_5O_5S_2$

**Pathway:**

TGF-beta/Smad;Epigenetics

**Target:**

PKC;PKC

**Purity / Grade:**

>98%

**Solubility:**

DMSO :  $\geq 50$  mg/mL (90.31 mM); H<sub>2</sub>O :

**Alternative Names:**

Ro 31-8220 methanesulfonate;Bisindolylmaleimide IX mesylate

**Observed Molecular Weight:**

553.65

## Product Description

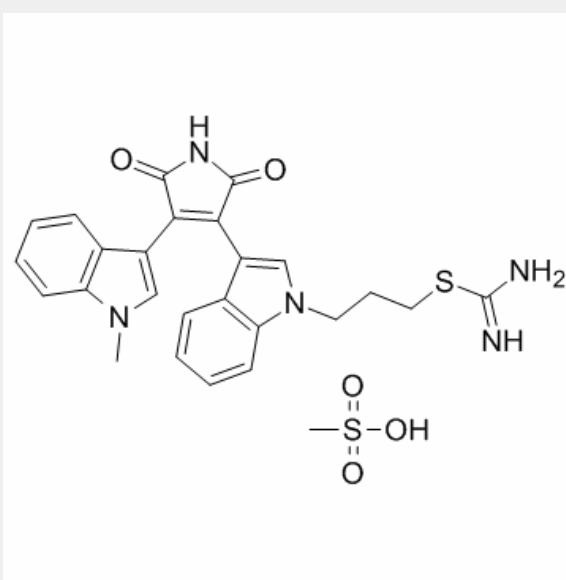
Ro 31-8220 mesylate is a potent **PKC** inhibitor, with **IC<sub>50</sub>**s of 5, 24, 14, 27, 24 and 23 nM for PKC $\alpha$ , PKC $\beta$ I, PKC $\beta$ II, PKC $\gamma$ , PKC $\epsilon$  and rat brain PKC, respectively. Ro 31-8220 also significantly inhibits MAPKAP-K1b, MSK1, S6K1 and GSK3 $\beta$  (**IC<sub>50</sub>**s, 3, 8, 15, and 38 nM,

respectively), with no effect on MKK3, MKK4, MKK6 and MKK7.

IC<sub>50</sub> & Target: IC<sub>50</sub>: 5 nM (PKC $\alpha$ ), 24 nM (PKC $\beta$ I), 14 nM (PKC $\beta$ II), 27 nM (PKC $\gamma$ ), 24 nM (PKC $\epsilon$ ), 23 nM (Rat brain PKC)<sup>[1]</sup>, 3 nM (MAPKAP-K1b), 8 nM (MSK1), 15 nM (S6K1), 38 nM (GSK3 $\beta$ )<sup>[2]</sup>

**In Vitro:** Ro 31-8220 mesylate is a potent PKC inhibitor, with IC<sub>50</sub>s of 5, 24, 14, 27, 24 and 23 nM for PKC $\alpha$ , PKC $\beta$ I, PKC $\beta$ II, PKC $\gamma$ , PKC $\epsilon$  and rat brain PKC, respectively<sup>[1]</sup>. Ro 31-8220 also significantly inhibits MAPKAP-K1b, MSK1, S6K1 and GSK3 $\beta$  (IC<sub>50</sub>s, 3, 8, 15, and 38 nM, respectively), with no effect on MKK3, MKK4, MKK6 and MKK7. Moreover, Ro 31-8220 directly suppresses voltage-dependent Na<sup>+</sup> channels<sup>[2]</sup>. Ro 31-8220 (1  $\mu$ M) is neuroprotective against paraoxon-induced neuronal cell death in cerebellar granule neurons, blocks paraoxon-induced caspase-3 activity, and reduces the paraoxon-induced increase in phospho-PKC pan levels<sup>[3]</sup>.

**In Vivo:** Ro 31-8220 (6 mg/kg/d, s.c.) is well tolerated, and has half-life of 5.7 hours in mice. Ro 31-8220-treated MLP<sup>-/-</sup> mice show a dramatic rescue in fractional shortening after treatment for 6 weeks, but the WT mice shows no change<sup>[4]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!