

Ro 31-8220

## Chemical Properties

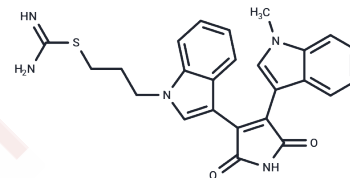
CAS No. : 125314-64-9

Formula: C<sub>25</sub>H<sub>23</sub>N<sub>5</sub>O<sub>2</sub>S

Molecular Weight: 457.55

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Ro 31-8220 is a potent inhibitor of PKC with IC <sub>50</sub> values 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 $\beta$ with IC <sub>50</sub> values of 3, 8, 15, and 38 nM, respectively, without affecting MKK3, MKK4, MKK6, and MKK7.
Targets(IC <sub>50</sub> )	Others,JNK,PKC
In vitro	Ro 31-8220 is a potent inhibitor of protein kinase C (PKC), with IC <sub>50</sub> values 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. It also inhibits MAPKAP-K1b, MSK1, S6K1, and GSK3 $\beta$ with IC <sub>50</sub> values of 3, 8, 15, and 38 nM, while showing no effect on MKK3, MKK4, MKK6, and MKK7. Additionally, Ro 31-8220 directly suppresses voltage-dependent Na <sup>+</sup> channels and provides neuroprotection against paraoxon-induced neuronal cell death in cerebellar granule neurons by inhibiting paraoxon-induced caspase-3 activity and reducing increased phospho-PKC pan levels at a concentration of 1 $\mu$ M.
In vivo	Ro 31-8220, administered subcutaneously at a dosage of 6 mg/kg/day, is well-tolerated in mice with a half-life of 5.7 hours. Treatment with Ro 31-8220 significantly improves fractional shortening in MLP/mice over a period of 6 weeks, whereas there is no observable effect in wild-type (WT) mice [4].

### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	2.1856 mL	10.9278 mL	21.8555 mL
5 mM	0.4371 mL	2.1856 mL	4.3711 mL
10 mM	0.2186 mL	1.0928 mL	2.1856 mL
50 mM	0.0437 mL	0.2186 mL	0.4371 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

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