

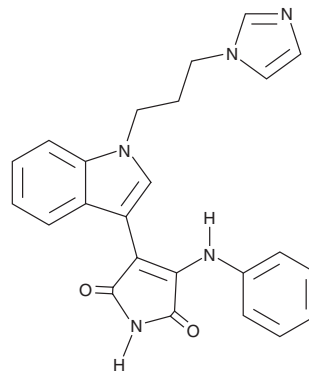
# PRODUCT INFORMATION



## PKC $\beta$ Inhibitor

Item No. 35494

<b>CAS Registry No.:</b>	257879-35-9
<b>Formal Name:</b>	3-[1-[3-(1H-imidazol-1-yl)propyl]-1H-indol-3-yl]-4-(phenylamino)-1H-pyrrole-2,5-dione
<b>Synonym:</b>	Protein Kinase C $\beta$ Inhibitor
<b>MF:</b>	C <sub>24</sub> H <sub>21</sub> N <sub>5</sub> O <sub>2</sub>
<b>FW:</b>	411.5
<b>Purity:</b>	≥98%
<b>UV/Vis.:</b>	$\lambda_{\text{max}}$ : 226 nm
<b>Supplied as:</b>	A solid
<b>Storage:</b>	-20°C
<b>Stability:</b>	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

PKC $\beta$  inhibitor is supplied as a solid. A stock solution may be made by dissolving the PKC $\beta$  inhibitor in the solvent of choice, which should be purged with an inert gas. PKC $\beta$  inhibitor is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of PKC $\beta$  inhibitor in ethanol is approximately 1 mg/ml and approximately 10 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of PKC $\beta$  inhibitor can be prepared by directly dissolving the solid in aqueous buffers. The solubility of PKC $\beta$  inhibitor in PBS (pH 7.2) is approximately 0.25 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

PKC $\beta$  inhibitor is an inhibitor of PKC $\beta$ 1 and PKC $\beta$ 2 (IC<sub>50</sub>s = 21 and 5 nM, respectively).<sup>1</sup> It is selective for PKC $\beta$ 1 and PKC $\beta$ 2 over PKC $\alpha$ , PKC $\epsilon$ , and PKC $\gamma$  (IC<sub>50</sub>s = 331, 2,807, and >1,000 nM, respectively), as well as JAK1, JAK2, and tyrosine kinase 2 (TYK2; IC<sub>50</sub>s = 770, 3,850, and 2,310 nM, respectively), but also inhibits JAK3 (IC<sub>50</sub> = 17 nM).<sup>1,2</sup> PKC $\beta$  inhibitor (14  $\mu$ M) induces apoptosis and inhibits cell cycle progression in 2F7 AIDS-related Burkitt's lymphoma cells.<sup>3</sup>

### References

1. Tanaka, M., Sagawa, S., Hoshi, J.-I., *et al.* Synthesis of anilino-monoindolylmaleimides as potent and selective PKC $\beta$  inhibitors. *Bioorg. Med. Chem. Lett.* **14**(20), 5171-5174 (2004).
2. McDonnell, M.E., Bian, H., Wrobel, J., *et al.* Anilino-monoindolylmaleimides as potent and selective JAK3 inhibitors. *Bioorg. Med. Chem. Lett.* **24**(4), 1116-1121 (2014).
3. Saba, N.S. and Levy, L.S. Protein kinase C-beta inhibition induces apoptosis and inhibits cell cycle progression in acquired immunodeficiency syndrome-related non-Hodgkin lymphoma cells. *J. Investig. Med.* **60**(1), 29-38 (2012).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/27/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM