Bisindolylmaleimide IV

Product Number B 3306
Storage Temperature –20 °C
CAS# 119139-23-0

Synonyms: Arcyriarubin A, 2,3-Bis(indol-3-yl)-maleimide, 3,4-Bis(1H-indol-3-yl)-1H-pyrrole-2,5-dione, Ro 31-6233

Product Description
Molecular formula: C_{20}H_{13}N_{3}O_{2}
Mol. wt.: 327.3

Bisindolylmaleimides are potent, selective inhibitors of protein kinase C (PKC).\textsuperscript{1-5} They are structurally similar to the naturally occurring molecule, staurosporine, but they are more selective for PKC over other protein kinases. Bisindolylmaleimides are used to selectively probe for PKC-mediated pathways for transduction of hormone, cytokine, and growth factor signals.

Bisindolylmaleimides inhibit PKC by interacting with the catalytic subunit. Inhibition is competitive with ATP. Studies of structure-activity relationships of analogs indicate that cationic substituents at the indole nitrogen

Bisindolylmaleimide IV inhibits PKC within intact platelets and T cells. It inhibits Fas-mediated apoptosis and T cell-mediated autoimmune diseases.\textsuperscript{1}

The selectivity of bisindolylmaleimide IV for rat brain PKC over two other protein kinases is shown in the table below.\textsuperscript{2,3}

<table>
<thead>
<tr>
<th>Enzyme</th>
<th>IC\textsubscript{50}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protein Kinase C</td>
<td>87 nM</td>
</tr>
<tr>
<td>cAMP-Dependent Protein Kinase</td>
<td>2000 nM</td>
</tr>
<tr>
<td>Phosphorylase Kinase</td>
<td>3200 nM</td>
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</tbody>
</table>

Preparation Instructions
Prepare stock solutions in DMSO, or MeOH.

Storage/Stability
Store at –20 °C. Protect from light.

Reference
3. Davis, P.D., et al., Inhibitors of protein kinase C.
5. Bit, R. A., et al., Inhibitors of protein kinase C.

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