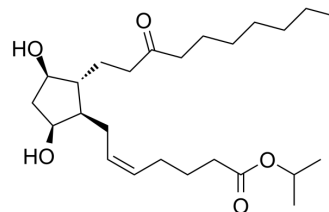


## Isopropyl unoprostone

Cat. No.:	HY-109545
CAS No.:	120373-24-2
Molecular Formula:	C <sub>25</sub> H <sub>44</sub> O <sub>5</sub>
Molecular Weight:	424.61
Target:	Potassium Channel
Pathway:	Membrane Transporter/Ion Channel
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Isopropyl unoprostone (Unoprostone isopropyl ester), an analogue of a prostaglandin metabolite, is a potent large conductance Ca <sup>2+</sup> -activated K <sup>+</sup> (BK) channels activator. Isopropyl unoprostone has antiglaucoma effects, lowering intraocular pressure (IOP) by increasing aqueous humour outflow. Isopropyl unoprostone can improve retinal sensitivity and the protection of central retinal sensitivity <sup>[1][2]</sup> .																
<b>IC<sub>50</sub> &amp; Target</b>	BK channels <sup>[1]</sup>																
<b>In Vitro</b>	<p>Isopropyl unoprostone (0.01-1 μM; 24 h) protects against H<sub>2</sub>O<sub>2</sub>-induced 661W cell death<sup>[2]</sup>.</p> <p>Isopropyl unoprostone (0.1-3 μM; 24 h) reduced the morphological change of 661W cells and protects against light-induced cell death<sup>[2]</sup>.</p> <p>Isopropyl unoprostone (0.001-1 μM; 48 h) suppresses light-induced phagocytotic dysfunction in ARPE-19 cells<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Apoptosis Analysis<sup>[2]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>661W (treated with Isopropyl unoprostone for 1 h, then added H<sub>2</sub>O<sub>2</sub>)</td> </tr> <tr> <td>Concentration:</td> <td>0.01, 0.1 and 1 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 h</td> </tr> <tr> <td>Result:</td> <td>Protected against H<sub>2</sub>O<sub>2</sub>-induced cell death in a concentration-dependent manner.</td> </tr> </table> <p>Apoptosis Analysis<sup>[2]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>661W (treated with Isopropyl unoprostone for 1 h, then exposed to 2,500 lux of white fluorescent light)</td> </tr> <tr> <td>Concentration:</td> <td>0.1, 1 and 3 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 h</td> </tr> <tr> <td>Result:</td> <td>Protected against light-induced cell death in a concentration-dependent manner, and the effect was significant at the 1 and 3 μM concentrations; reduced the morphological change (the transition to a rounder shape) which is potentially indicative of a pre-apoptotic stage.</td> </tr> </table>	Cell Line:	661W (treated with Isopropyl unoprostone for 1 h, then added H <sub>2</sub> O <sub>2</sub> )	Concentration:	0.01, 0.1 and 1 μM	Incubation Time:	24 h	Result:	Protected against H <sub>2</sub> O <sub>2</sub> -induced cell death in a concentration-dependent manner.	Cell Line:	661W (treated with Isopropyl unoprostone for 1 h, then exposed to 2,500 lux of white fluorescent light)	Concentration:	0.1, 1 and 3 μM	Incubation Time:	24 h	Result:	Protected against light-induced cell death in a concentration-dependent manner, and the effect was significant at the 1 and 3 μM concentrations; reduced the morphological change (the transition to a rounder shape) which is potentially indicative of a pre-apoptotic stage.
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## REFERENCES

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- [1]. Hara M, et al. Unoprostone (isopropyl unoprostone). *Drugs Aging*. 1996 Sep;9(3):213-8; discussion 219-20.
- [2]. Tsuruma K, et al. Unoprostone reduces oxidative stress- and light-induced retinal cell death, and phagocytotic dysfunction, by activating BK channels. *Mol Vis*. 2011;17:3556-65.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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