



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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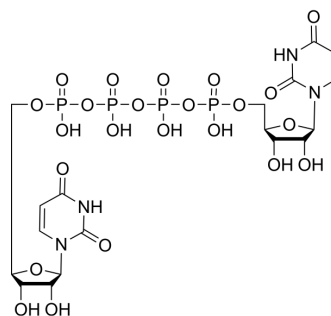
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## Diquafosol

<b>Cat. No.:</b>	HY-B0606A
<b>CAS No.:</b>	59985-21-6
<b>Molecular Formula:</b>	C <sub>18</sub> H <sub>26</sub> N <sub>4</sub> O <sub>23</sub> P <sub>4</sub>
<b>Molecular Weight:</b>	790.31
<b>Target:</b>	Apoptosis; P2Y Receptor; Reactive Oxygen Species
<b>Pathway:</b>	Apoptosis; GPCR/G Protein; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Diquafosol (INS365 free base) is a potent P2Y2 agonist. Diquafosol inhibits apoptosis and decreases ROS generation. Diquafosol has the potential for the research of dry eye <sup>[1]</sup> .								
<b>IC<sub>50</sub> &amp; Target</b>	P2Y2 Receptor								
<b>In Vitro</b>	<p>Diquafosol (3%; 24 h) inhibits apoptosis and decreases ROS generation in dry-conditioned hCECs<sup>[1]</sup>. Diquafosol (3%; 24 h) increases the protein expression of phospho-Erk1/2, phospho-Akt, and phospho-p90RSK in hCECs<sup>[1]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Western Blot Analysis<sup>[1]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>human corneal epithelial cells (hCECs)</td> </tr> <tr> <td>Concentration:</td> <td>3% (diluted at 1:100)</td> </tr> <tr> <td>Incubation Time:</td> <td>24 h</td> </tr> <tr> <td>Result:</td> <td>Increased the protein expression of phospho-Erk1/2, phospho-Akt, and phospho-p90RSK.</td> </tr> </table>	Cell Line:	human corneal epithelial cells (hCECs)	Concentration:	3% (diluted at 1:100)	Incubation Time:	24 h	Result:	Increased the protein expression of phospho-Erk1/2, phospho-Akt, and phospho-p90RSK.
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Incubation Time:	24 h								
Result:	Increased the protein expression of phospho-Erk1/2, phospho-Akt, and phospho-p90RSK.								
<b>In Vivo</b>	<p>Diquafosol (ophthalmic solution 3%; eyedrop, four times daily for 28 days) reduces intracellular ROS levels, apoptosis, and inflammation in rat<sup>[1]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>6 weeks, 160-180 g Wistar female rats (dry eye model)<sup>[1]</sup></td> </tr> <tr> <td>Dosage:</td> <td>ophthalmic solution 3%</td> </tr> <tr> <td>Administration:</td> <td>eyedrop, four times daily (8, 12 AM; 4, 8 PM) for 28 days</td> </tr> <tr> <td>Result:</td> <td>Increased the expression of phospho-Erk1/2, phospho-Akt, and phospho-p90RSK, inhibits apoptosis, decreased the IL-1β, TNF-α expression.</td> </tr> </table>	Animal Model:	6 weeks, 160-180 g Wistar female rats (dry eye model) <sup>[1]</sup>	Dosage:	ophthalmic solution 3%	Administration:	eyedrop, four times daily (8, 12 AM; 4, 8 PM) for 28 days	Result:	Increased the expression of phospho-Erk1/2, phospho-Akt, and phospho-p90RSK, inhibits apoptosis, decreased the IL-1β, TNF-α expression.
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## CUSTOMER VALIDATION

- Commun Biol. 2023 Aug 29;6(1):889.
- Int J Mol Sci. 2022, 23(14), 7870.
- Patent. US20220387470A1.
- Patent. US20210299155A1.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

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## REFERENCES

[1]. Park JH, et al. Diquafosol Sodium Inhibits Apoptosis and Inflammation of Corneal Epithelial Cells Via Activation of Erk1/2 and RSK: In Vitro and In Vivo Dry Eye Model. Invest Ophthalmol Vis Sci. 2018 Oct 1;59(12):5108-5115.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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