



# SZABO SCANDIC

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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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- Expressversand

### SZABO-SCANDIC HandelsgmbH

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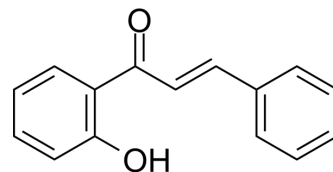
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## 2'-Hydroxychalcone-1

<b>Cat. No.:</b>	HY-W012349
<b>CAS No.:</b>	1214-47-7
<b>Molecular Formula:</b>	C <sub>15</sub> H <sub>12</sub> O <sub>2</sub>
<b>Molecular Weight:</b>	224.25
<b>Target:</b>	Fungal; Apoptosis; Autophagy; NF-κB
<b>Pathway:</b>	Anti-infection; Apoptosis; Autophagy; NF-κB
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	2'-Hydroxychalcone is a hydroxyl derivative of chalcones with anticancer activities. 2'-Hydroxychalcone inhibits NF-κB pathway and induces autophagy and apoptosis in breast cancer cells <sup>[1]</sup> . 2'-Hydroxychalcone shows a better antifungal activity against the complex <i>Paracoccidioides</i> spp <sup>[2]</sup> .																
<b>In Vitro</b>	<p>2'-Hydroxychalcone (10-90 μM; 12-72 h) suppresses cell viability in a dose-dependent manner, with IC<sub>50</sub> values of 37.74 μM and 34.26 μM for the two breast cancer cell lines MCF-7 and CMT-1211, respectively<sup>[1]</sup>.</p> <p>2'-Hydroxychalcone (10-30 μM; 24 h) promotes autophagy vesicle accumulation in breast cancer cells<sup>[1]</sup>.</p> <p>2'-Hydroxychalcone (30 μM; 24 h) induces autophagy-dependent apoptosis in breast cancer cells, and increases cleavage of caspase-3 and PARP<sup>[1]</sup>.</p> <p>2'-Hydroxychalcone (10-30 μM; 24 h) significantly reduces the expression of p-IκB and p-NF-κBp65, and elevates the levels of p-ERK and p-JNK<sup>[1]</sup>.</p> <p>2'-Hydroxychalcone (30 μM; 12-24 h) increased the intracellular ROS levels and triggered endoplasmic reticulum stress (ERS) of breast cancer cells<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p><b>Cell Viability Assay<sup>[1]</sup></b></p> <table border="1"> <tr> <td>Cell Line:</td> <td>MCF-7 and CMT-1211 cells</td> </tr> <tr> <td>Concentration:</td> <td>10 μM, 20 μM, 30 μM, 40 μM, 50 μM, 60 μM, 70 μM, 80 μM, and 90 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>12 h, 24 h, 36 h, 48 h, 60 h, and 72 h</td> </tr> <tr> <td>Result:</td> <td>Suppressed cell viability in a dose-dependent manner.</td> </tr> </table> <p><b>Cell Autophagy Assay<sup>[1]</sup></b></p> <table border="1"> <tr> <td>Cell Line:</td> <td>MCF-7 and CMT-1211 cells</td> </tr> <tr> <td>Concentration:</td> <td>10 μM, 20 μM, 30 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 h</td> </tr> <tr> <td>Result:</td> <td>Induced autophagy and promoted autophagy flux in breast cancer cells.</td> </tr> </table> <p><b>Apoptosis Analysis<sup>[1]</sup></b></p>	Cell Line:	MCF-7 and CMT-1211 cells	Concentration:	10 μM, 20 μM, 30 μM, 40 μM, 50 μM, 60 μM, 70 μM, 80 μM, and 90 μM	Incubation Time:	12 h, 24 h, 36 h, 48 h, 60 h, and 72 h	Result:	Suppressed cell viability in a dose-dependent manner.	Cell Line:	MCF-7 and CMT-1211 cells	Concentration:	10 μM, 20 μM, 30 μM	Incubation Time:	24 h	Result:	Induced autophagy and promoted autophagy flux in breast cancer cells.
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<b>In Vivo</b>	<p>2'-Hydroxychalcone (20-60 mg/kg; ip; every 2 days; 3 weeks) could exhibit an antitumor effect in vivo without causing significant toxicity to essential organs<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tbody> <tr> <td>Animal Model:</td> <td>Five-week-old Balb/C female mice injected with CMT-1211 cells<sup>[1]</sup></td> </tr> <tr> <td>Dosage:</td> <td>20 mg/kg, 40 mg/kg, 60 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Intraperitoneal injection; every 2 days; 3 weeks</td> </tr> <tr> <td>Result:</td> <td>Suppressed tumor growth and metastasis in vivo.</td> </tr> </tbody> </table>	Animal Model:	Five-week-old Balb/C female mice injected with CMT-1211 cells <sup>[1]</sup>	Dosage:	20 mg/kg, 40 mg/kg, 60 mg/kg	Administration:	Intraperitoneal injection; every 2 days; 3 weeks	Result:	Suppressed tumor growth and metastasis in vivo.
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## REFERENCES

- [1]. Kaila P Medina-Alarcón, et al. Antifungal activity of 2'-hydroxychalcone loaded in nanoemulsion against *Paracoccidioides* spp. *Future Microbiol.* 2020 Jan;15:21-33.
- [2]. Xiao Wang, et al. 2'-Hydroxychalcone Induces Autophagy and Apoptosis in Breast Cancer Cells via the Inhibition of the NF- $\kappa$ B Signaling Pathway: In Vitro and In Vivo Studies. *Nutrients.* 2024 Feb 13;16(4):514.

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

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