



<b>Catalog Number:</b>	MC11004	<b>Product Type:</b>	Small Molecule
<b>Bio-Activity:</b>	Neuroprotective/Neuritogenic agent	<b>CAS #:</b>	495-02-3
<b>Research Categories:</b>	Neuroscience, cell death, oxidative stress, stem cells	<b>Chemical Name:</b>	7-[[[(2E)-3,7-dimethyl-2,6-octadien-1-yl]oxy]-2H-1-benzopyran-2-one
<b>Solubility:</b>	Soluble in DMSO (up to 40 mg/ml)	<b>Molecular Formula:</b>	C19H22O3
<b>Purity:</b>	> 98%	<b>Molecular Weight:</b>	298.36
<b>Format:</b>	Powder	<b>Ship Temp:</b>	Ambient
<b>Storage:</b>	-20°C		

### Application Notes

#### Description/Data:

Auraptene is a bioactive terpenoid found in many citrus fruits that has been noted as a potential therapeutic (1). It has been shown to display neuritogenic activity (2) and neuroprotective effects through a suppression of inflammation and induction of GDNF and BDNF in neurons (3). Auraptene also inhibits ROS production and boosts mitochondrial respiration which decreases Parkinson's disease-like symptoms (4). Lastly, it has also been known for hepatoprotective (5) and chemo preventive activity (6).

#### References:

- 1) Bibak et al. (2019), A Review of the Pharmacological and Therapeutic Effects of Auraptene; *Biofactors*, 45 867
- 2) Furukawa et al. (2012), Neurotrophic Effects of Citrus Auraptene: Neuritogenic Activity in PC12 Cells; *Int. J. Mol. Sci.*, 13 5338
- 3) Furukawa et al. (2020), Citrus Auraptene Induces Expression of Brain-Derived Neurotrophic Factor in Neuro2a Cells; *Molecules*, 25 1117
- 4) Jang et al. (2019), Auraptene Mitigates Parkinson's Disease-Like Behavior by Protecting Inhibition of Mitochondrial Respiration and Scavenging Reactive Oxygen Species; *Int. J. Mol. Sci.*, 20 3409

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5) Wang et al. (2019), Hepatoprotection of Auraptene From the Peels of Citrus Fruits Against 17 $\alpha$ -ethinylestradiol-induced Cholestasis in Mice by Activating Farnesoid X Receptor; *Food Funct.*, 10 3839

6) Tanaka et al. (1998), Citrus Auraptene Exerts Dose-Dependent Chemopreventative Activity in Rat Large Bowel Tumorigenesis: The Inhibition Correlates With Suppression of Cell Proliferation and Lipid Peroxidation and With Induction of Phase II Drug-Metabolizing Enzymes; *Cancer Res.*, 58 2550

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