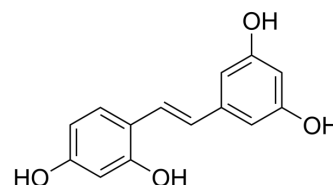


## Oxyresveratrol

<b>Cat. No.:</b>	HY-N1430		
<b>CAS No.:</b>	29700-22-9		
<b>Molecular Formula:</b>	C <sub>14</sub> H <sub>12</sub> O <sub>4</sub>		
<b>Molecular Weight:</b>	244.24		
<b>Target:</b>	Tyrosinase; Autophagy; HSV		
<b>Pathway:</b>	Metabolic Enzyme/Protease; Autophagy; Anti-infection		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 50 mg/mL (204.72 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	4.0943 mL	20.4717 mL	40.9433 mL
		5 mM	0.8189 mL	4.0943 mL	8.1887 mL
10 mM		0.4094 mL	2.0472 mL	4.0943 mL	
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 2.5 mg/mL (10.24 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (10.24 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 2.5 mg/mL (10.24 mM); Clear solution</li> </ol>				

### BIOLOGICAL ACTIVITY

<b>Description</b>	Oxyresveratrol (trans-Oxyresveratrol) is a potent naturally occurring antioxidant and free radical scavenger (IC <sub>50</sub> of 28.9 μM against DPPH free radicals). Oxyresveratrol is potent and noncompetitive tyrosinase inhibitor with an IC <sub>50</sub> value of 1.2 μM for mushroom tyrosinase. Oxyresveratrol is effective against HSV-1, HSV-2 and varicella-zoster virus, and has neuroprotective effects <sup>[1][2][3][4]</sup> .	
<b>IC<sub>50</sub> &amp; Target</b>	HSV-1	HSV-2

<p><b>In Vitro</b></p>	<p>Cultures of the murine microglial cell line N9 and primary mixed glial cultures were used to test the drug effects of NO production upon expression of the inducible isoform of nitric oxide synthase (iNOS). Oxyresveratrol considerably diminished NO (nitrite) levels (IC<sub>50</sub> of 45.31 μM) in murine microglial cells<sup>[1]</sup>.  Oxyresveratrol can inhibit DOPA oxidase activity, cyclooxygenase, and rat liver mitochondrial ATPase activity<sup>[1]</sup>.  Oxyresveratrol exhibits 63.3% inhibition at 100 μM and an IC<sub>50</sub> value of 52.7 μM on the murine tyrosinase activity.  Oxyresveratrol exhibits a dose-dependent inhibitory effect on L-tyrosine oxidation by the murine tyrosinase but does not inhibit the promoter activity of the enzyme gene. Oxyresveratrol exhibits significant inhibitory effects at 10 μM and higher concentrations on murine tyrosinase activity<sup>[2]</sup>.  MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>								
<p><b>In Vivo</b></p>	<p>Oxyresveratrol (2-30 mg/kg; intraperitoneal injection; twice) treatment reduces the brain infarct volume in MCAO rats. Oxyresveratrol treatment diminishes cytochrome c release and decreased caspase-3 activation, and reduces the number of apoptotic nuclei in ischemic brain in MCAO rats<sup>[3]</sup>.  MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1" data-bbox="345 621 1515 856"> <tr> <td data-bbox="345 621 618 684">Animal Model:</td> <td data-bbox="618 621 1515 684">Adult male Wistar rats (300-350 g) with middle cerebral artery occlusion (MCAO)<sup>[3]</sup></td> </tr> <tr> <td data-bbox="345 684 618 747">Dosage:</td> <td data-bbox="618 684 1515 747">2 mg/kg, 10 mg/kg, 20 mg/kg and 30 mg/kg</td> </tr> <tr> <td data-bbox="345 747 618 810">Administration:</td> <td data-bbox="618 747 1515 810">Intraperitoneal injection; twice (at the time of occlusion and at the time of reperfusion)</td> </tr> <tr> <td data-bbox="345 810 618 856">Result:</td> <td data-bbox="618 810 1515 856">Reduced the brain infarct volume in MCAO rats.</td> </tr> </table>	Animal Model:	Adult male Wistar rats (300-350 g) with middle cerebral artery occlusion (MCAO) <sup>[3]</sup>	Dosage:	2 mg/kg, 10 mg/kg, 20 mg/kg and 30 mg/kg	Administration:	Intraperitoneal injection; twice (at the time of occlusion and at the time of reperfusion)	Result:	Reduced the brain infarct volume in MCAO rats.
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Result:	Reduced the brain infarct volume in MCAO rats.								

## REFERENCES

- [1]. Lorenz, et al. Oxyresveratrol and resveratrol are potent antioxidants and free radical scavengers: Effect on nitrosative and oxidative stress derived from microglial cells. *Nitric Oxide* 9(2) 64-76 (2003).
- [2]. Kim, Y.M., Yun, J., Lee, C., et al. Oxyresveratrol and hydroxystilbene compounds. Inhibitory effect on tyrosinase and mechanism of action. *J Biol Chem* 277(18) 16340-16344 (2002).
- [3]. Shaida A Andrabi et al. Oxyresveratrol (trans-2,3',4,5'-tetrahydroxystilbene) is neuroprotective and inhibits the apoptotic cell death in transient cerebral ischemia. *Brain Res*, 2004 Aug 13, 1017(1-2):98-107.
- [4]. Vimolmas Lipipun, et al. Topical cream-based oxyresveratrol in the treatment of cutaneous HSV-1 infection in mice. *Antiviral Res.* 2011 Aug;91(2):154-60.

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

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