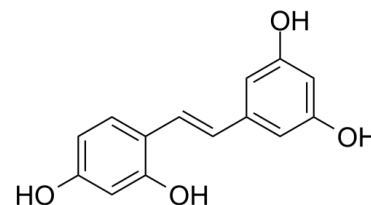


Data Sheet

Product Name:	Oxyresveratrol
Cat. No.:	CS-5655
CAS No.:	29700-22-9
Molecular Formula:	C ₁₄ H ₁₂ O ₄
Molecular Weight:	244.24
Target:	Autophagy; HSV; Tyrosinase
Pathway:	Anti-infection; Autophagy; Metabolic Enzyme/Protease
Solubility:	DMSO : 50 mg/mL (204.72 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

Oxyresveratrol (trans-Oxyresveratrol) is a potent naturally occurring antioxidant and free radical scavenger (IC₅₀ of 28.9 μM against DPPH free radicals). Oxyresveratrol is potent and noncompetitive **tyrosinase** inhibitor with an IC₅₀ value of 1.2 μM for mushroom tyrosinase. Oxyresveratrol is effective against **HSV-1**, **HSV-2** and **varicella-zoster virus**, and has neuroprotective effects^{[1][2][3][4]}.
 IC₅₀ & Target: IC₅₀: 1.2 μM (Mushroom tyrosinase)^[2]; 28.9 μM (DPPH free radicals)^[1]; 45.31 μM (NO)^[1]
 HSV-1, HSV-2, Varicella-zoster virus^[4] **In Vitro:** 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 (IC₅₀ of 45.31 μM) in murine microglial cells^[1]. Oxyresveratrol can inhibit DOPA oxidase activity, cyclooxygenase, and rat liver mitochondrial ATPase activity^[1]. Oxyresveratrol exhibits 63.3% inhibition at 100 μM and an IC₅₀ 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^[2]. **In Vivo:** 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^[3].

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.

CAIndexNames:

1,3-Benzenediol, 4-[(1E)-2-(3,5-dihydroxyphenyl)ethenyl]-

SMILES:

OC1=CC=C(/C=C/C2=CC(O)=CC(O)=C2)C(O)=C1

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

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