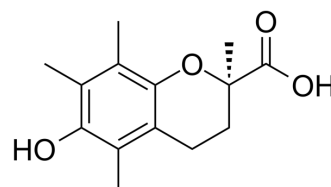


## (R)-Trolox

<b>Cat. No.:</b>	HY-101445A		
<b>CAS No.:</b>	53101-49-8		
<b>Molecular Formula:</b>	C <sub>14</sub> H <sub>18</sub> O <sub>4</sub>		
<b>Molecular Weight:</b>	250.29		
<b>Target:</b>	Tyrosinase		
<b>Pathway:</b>	Metabolic Enzyme/Protease		
<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 : 200 mg/mL (799.07 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	3.9954 mL	19.9768 mL	39.9537 mL
		5 mM	0.7991 mL	3.9954 mL	7.9907 mL
10 mM		0.3995 mL	1.9977 mL	3.9954 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; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.25 mg/mL (8.99 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 2.25 mg/mL (8.99 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 2.08 mg/mL (8.31 mM); Clear solution</li> </ol>				

### BIOLOGICAL ACTIVITY

<b>Description</b>	(R)-Trolox is a vitamin E analogue and a competitive tyrosinase inhibitor with a K <sub>i</sub> value of 0.83 mM and a ID <sub>50</sub> value of 1.88 mM <sup>[1]</sup> . The (R)-Trolox has stronger tyrosinase affinity than the (S) enantiomer (K <sub>i</sub> value of 0.61 mM) <sup>[1]</sup> .
<b>In Vitro</b>	As compared to the control containing no inhibitor, DMSO suppresses the tyrosinase activity at tested levels, 100 and 200 μL in a total volume of 3.0 mL. The inhibition of DMSO on the mushroom tyrosinase is dosedependent. Additions of DMSO at the two levels in the tyrosinase digests containing (R)-Trolox ((R)-HTCCA) results in further inhibitions of the tyrosinase activity. The influence of the DMSO on the inhibitory effects of (R)-Trolox against the tyrosinase is also dose-dependent <sup>[1]</sup> .

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MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## REFERENCES

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[1]. Yu L. Inhibitory effects of (S)- and (R)-6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acids on tyrosinase activity. J Agric Food Chem. 2003 Apr 9;51(8):2344-7.

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

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