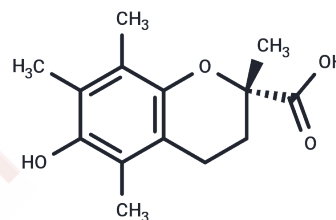


(S)-Trolox

Chemical Properties

CAS No. :	53174-06-4
Formula:	C ₁₄ H ₁₈ O ₄
Molecular Weight:	250.29
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	(S)-Trolox, an analogue of vitamin E, substitutes the phytyl chain with a carboxyl group. This compound serves as a model substance in structural studies and as a standard for assessing antioxidant activity. Moreover, (S)-Trolox exhibits potent and specific neuroprotective and antioxidant properties.
Targets(IC50)	Others
In vitro	In the absence of MK-801, (S)-Trolox displays marginal neuroprotective effects. In the presence of MK-801 (10 μM), the neuroprotective efficacy of (S)-Trolox is greatly enhanced, giving rise to a recovery in MTT-reductase activity equivalent to 80-100% of control cultures. (S)-Trolox displays EC ₅₀ of 78 μM. The fluorescence increase in IAA-stimulated DCFH-DA-loaded cultures is inhibited in a dose-dependent manner by the antioxidants (S)-Trolox (IC ₅₀ of 97 μM). The antioxidant (S)-Trolox demonstrate a potent and specific neuroprotective action in an in vitro model of neurodegeneration induced by inhibition of the glycolytic enzyme GAPDH[1].

Preparing Stock Solutions

	1mg	5mg	10mg
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
50 mM	0.0799 mL	0.3995 mL	0.7991 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Malcolm CS, et al. Characterization of iodoacetate-mediated neurotoxicity in vitro using primary cultures of rat cerebellar granule cells. Free Radic Biol Med. 2000 Jan 1;28(1):102-7.

Górecki M, et al. Chromane helicity rule--scope and challenges based on an ECD study of various trolox derivatives. Org Biomol Chem. 2014 Apr 14;12(14):2235-54.

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