

Tyrosinase

Chemical Properties

CAS No. :	9002-10-2
Formula:	
Molecular Weight:	
Storage:	Store at low temperature Powder: -20°C for 3 years <small>Actual storage temperature shall be subject to the COA.</small>

Biological Description

Description	Tyrosinase (Polyphenol oxidase) is a key rate-limiting enzyme encoded by the TYR gene that controls melanin production and catalyzes tyrosine oxidation. It is mainly found in melanosomes and plays an important role in melanogenesis, plant secondary metabolism, wound healing and immune response.
Targets(IC50)	Tyrosinase
In vitro	<p>Tyrosinase activity assay</p> <p>I. Preparation of mother solution and working solution</p> <ol style="list-style-type: none"> 1. Preparation of mother solution: Dissolve Tyrosinase in ddH₂O and prepare it to 1 mg/mL. 2. Preparation of working solution: Dilute the mother solution to a concentration of 200-400 U/mL. <p>Note: The mother solution can be stored in aliquots at -20°C or -80°C, and the working solution should be prepared and used immediately.</p> <p>II. Experimental operation method</p> <ol style="list-style-type: none"> 1. Adjust the spectrophotometer to 280 nm and 25°C and add the sample to each colorimetric tube in the following order: 1 mL 0.5 M Phosphate buffer, pH 6.5 1 mL 0.001 M L-Tyrosine 0.9 mL ddH₂O 2. Fill the colorimetric tube with oxygen through the capillary for 4-5 minutes to fully oxidize the mixture in the reaction. 3. Place the colorimetric tube on the spectrophotometer and record the absorbance at 280nm for 4-5 minutes, which is recorded as the absorbance of the blank group. 4. Add 0.1 mL of appropriately diluted enzyme and record the absorbance at 280nm for 10-12 minutes. 5. Calculate 1U = the amount of enzyme that causes the absorbance at 280 nm to increase by 0.001 per minute.

Solubility Information

A DRUG SCREENING EXPERT

Solubility	H2O: 40 mg/mL, Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Reference

Sánchez-Ferrer A, et al. Tyrosinase: a comprehensive review of its mechanism. *Biochim Biophys Acta*. 1995 Feb 22; 1247(1):1-11.

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