

Cholesterol oxidase

Chemical Properties

CAS No. : 9028-76-6

Formula:

Molecular Weight:

Storage: Store at low temperature,Keep away from moisture
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	Cholesterol oxidase is a flavoenzyme that catalyzes the oxidation and isomerization of cholesterol to cholest-4-en-3-one. ChOx, an important virulence factor for Mycobacterium tuberculosis (Mtb), competitively inhibits TLR2 thereby inducing enhanced reactive oxygen species production by macrophages.
Targets(IC50)	Endogenous Metabolite,TLR
In vitro	Using the MTT assay, Cholesterol oxidase (23 U/mL) showed an inhibition rate of 62.9% -78.7% on cancer cells such as HepG-2 and HCT-116, and an inhibition rate of 57.2% on normal WI-38 cells. Additionally, Cholesterol oxidase can be used to detect cholesterol in serum and food samples (incubated at 37°C for 10 minutes) as well as cholesterol in cells/tissues (using the AmplexRed fluorescence method) [1,2].

Solubility Information

Solubility	H2O: 20 mg/mL,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Reference

El-Naggar NE,et al.Extracellular cholesterol oxidase production by Streptomyces aegyptia, in vitro anticancer activities against rhabdomyosarcoma, breast cancer cell-lines and in vivo apoptosis.Sci Rep.2018 Feb 9;8(1):2706.
Yuan Z,et al.GABA and astrocytic cholesterol determine the lipid environment of GABAAR in cultured cortical neurons.bioRxiv [Preprint]. 2024 Apr 29:2024.04.26.591395.

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