

## 11-Mercaptoundecanoic acid

## Chemical Properties

CAS No. : 71310-21-9

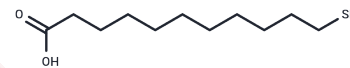
Formula: C<sub>11</sub>H<sub>22</sub>O<sub>2</sub>S

Molecular Weight: 218.356

Storage: Keep away from direct sunlight, 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	11-Mercaptoundecanoic acid (11-Thioundecanoic acid; MUA; MUDA) is a biochemical reagent utilized as a biomaterial or organic compound in life science research. 11-Mercaptoundecanoic acid (11-Thioundecanoic acid; MUA; MUDA) is applied in surface chemistry and biomaterials research, particularly in self-assembled monolayer formation, biointerface engineering, and molecular immobilization studies relevant to diagnostic assay development.
Targets(IC50)	Others
In vitro	<p>Methods: The optical properties of gold nanoclusters coated with 11-Mercaptoundecanoic acid were investigated. The material was applied to modify electrochemical immunosensors, and experiments for fluorescent detection of hydrogen sulfide and detection of polycyclic aromatic hydrocarbons in water were carried out respectively.</p> <p>Results: 11-Mercaptoundecanoic acid-capped gold nanoclusters exhibited aggregation-induced emission effect and achieved specific fluorescent detection of hydrogen sulfide [1]. The electrochemical immunosensor modified with 11-Mercaptoundecanoic acid can effectively detect polycyclic aromatic hydrocarbons in water [2].</p>

## Solubility Information

Solubility	DMSO: 160.00 mg/mL (732.75 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	4.5796 mL	22.898 mL	45.7959 mL
5 mM	0.9159 mL	4.5796 mL	9.1592 mL
10 mM	0.458 mL	2.2898 mL	4.5796 mL
50 mM	0.0916 mL	0.458 mL	0.9159 mL

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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

Lu F, et al. 11-Mercaptoundecanoic acid capped gold nanoclusters with unusual aggregation-enhanced emission for selective fluorometric hydrogen sulfide determination. *Mikrochim Acta*. 2020 Mar 4;187(4):200.

Ahmad A, et al. Electrochemical immunosensor modified with self-assembled monolayer of 11-mercaptoundecanoic acid on gold electrodes for detection of benzo[a]pyrene in water. *Analyst*. 2012 Dec 21;137(24):5839-44.

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