

Trx-red

## Chemical Properties

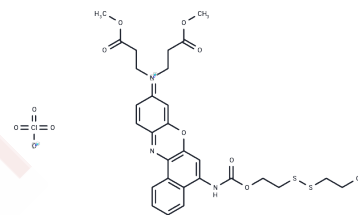
CAS No. : 2368978-96-3

Formula: C<sub>29</sub>H<sub>32</sub>ClN<sub>3</sub>O<sub>12</sub>S<sub>2</sub>

Molecular Weight: 714.15

Storage: Keep away from direct sunlight  
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	Trx-red (NBL-SS perchlorate) is a red-emitting fluorescent probe derived from the Nile blue fluorophore, specifically designed for imaging thioredoxin (Trx) in live cells and in vivo, with excitation and emission wavelengths of 615 nm and 661 nm, respectively.
Targets(IC50)	Others
In vitro	Trx-red (NBL-SS) exhibits several advantageous characteristics, including red emission, rapid response, and heightened fluorescence signal. Thioredoxin (Trx) plays a critical role in cellular processes such as growth, differentiation, and apoptosis, functioning as a widespread redox-regulating protein[1]. Notably, upon incubating HeLa cells with Trx-red (NBL-SS; 5 μM; 0-30 min), a significant time-dependent escalation in fluorescence is evident[1].
In vivo	Trx-red (NBL-SS; 10 μM; 30 min) effectively images thioredoxin in 6-day-old zebrafish larvae [1].

## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.4003 mL	7.0013 mL	14.0027 mL
5 mM	0.2801 mL	1.4003 mL	2.8005 mL
10 mM	0.140 mL	0.7001 mL	1.4003 mL
50 mM	0.028 mL	0.140 mL	0.2801 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

Huiyi Jia, et al. Fluorophore-Dependent Cleavage of Disulfide Bond Leading to a Highly Selective Fluorescent Probe of Thioredoxin. Anal Chem. 2019 Jul 2;91(13):8524-8531.

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