

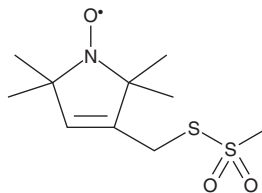
# PRODUCT INFORMATION



## MTSSL

Item No. 16463

**CAS Registry No.:** 81213-52-7  
**Formal Name:** 2,5-dihydro-2,2,5,5-tetramethyl-3-[[[(methylsulfonyl)thio]methyl]-1H-pyrrol-1-yloxy]  
**MF:** C<sub>10</sub>H<sub>18</sub>NO<sub>3</sub>S<sub>2</sub>  
**FW:** 264.4  
**Purity:** ≥98%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥2 years  
**Special Conditions:** Light sensitive



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

MTSSL is supplied as a crystalline solid. A stock solution may be made by dissolving the MTSSL in the solvent of choice. MTSSL is soluble in organic solvents such as ethanol, methanol, and DMSO, which should be purged with an inert gas.

### Description

MTSSL is a paramagnetic nitroxide spin label featuring a methanethiosulfonate group for site-directed spin labeling, particularly through disulfide linkages with cysteine residues on proteins.<sup>1,2</sup> When combined with electron paramagnetic resonance spectroscopy, site-directed spin labeling is used to study the structural dynamics of proteins, including membrane proteins.<sup>1,3</sup>

### References

1. Perozo, E., Cortes, D.M., and Cuello, L.G. Structural rearrangements underlying K<sup>+</sup>-channel activation gating. *Science* **285**(5424), 73-78 (1999).
2. Gaponenko, V., Howarth, J.W., Columbus, L., *et al.* Protein global fold determination using site-directed spin and isotope labeling. *Protein Sci.* **9**(2), 302-309 (2000).
3. Tombolato, F., Ferrarini, A., and Freed, J.H. Dynamics of the nitroxide side chain in spin-labeled proteins. *J. Phys. Chem. B* **110**(51), 26248-26259 (2006).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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