

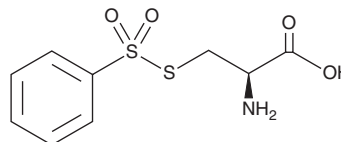
# PRODUCT INFORMATION



## S-Phenylsulfonylcysteine

Item No. 19281

**CAS Registry No.:** 97512-83-9  
**Formal Name:** S-(phenylsulfonyl)-L-cysteine  
**Synonym:** SPSC  
**MF:** C<sub>9</sub>H<sub>11</sub>NO<sub>4</sub>S<sub>2</sub>  
**FW:** 261.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 221, 261 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

S-Phenylsulfonylcysteine is supplied as a crystalline solid. A stock solution may be made by dissolving the S-phenylsulfonylcysteine in the solvent of choice. S-Phenylsulfonylcysteine is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of S-phenylsulfonylcysteine in these solvents is approximately 0.5 and 0.1 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of S-phenylsulfonylcysteine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of S-phenylsulfonylcysteine in PBS, pH 7.2, is approximately 0.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

S-Nitrosylation reactions regulate protein function and mediate nitrosative stress.<sup>1</sup> S-Phenylsulfonylcysteine is a reagent for blocking thiol (-SH) groups on proteins and peptides at room temperature.<sup>2</sup> This is the first step of the thiosulfonate switch technique, in which thiosulfonates are fluorescently tagged with a probe bearing a reactive thiol, such as rhodamine-SH.<sup>2</sup>

### References

1. Gaston, B. Nitric oxide and thiol groups. *Biochim. Biophys. Acta* **1411**, 323-333 (1999).
2. Reeves, B.D., Joshi, N., Campanello, G.C., *et al.* Conversion of S-phenylsulfonylcysteine residues to mixed disulfides at pH 4.0: Utility in protein thiol blocking and in protein-S-nitrosothiol detection. *Org. Biomol. Chem.* (2014).

#### 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.

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