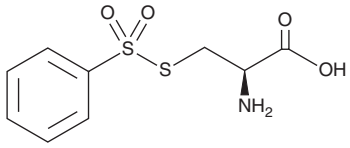
PRODUCT INFORMATION

S-Phenylsulfonylcysteine

Item No. 19281

CAS Registry No.: 97512-83-9
Formal Name: S-(phenylsulfonyl)-L-cysteine
Synonym: SPSC
MF: $C_9H_{11}NO_4S_2$
FW: 261.3
Purity: ≥98%
UV/Vis.: λ_{max}: 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.[1] S-Phenylsulfonylcysteine is a reagent for blocking thiol (-SH) groups on proteins and peptides at room temperature.[2] 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.[2]

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).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM