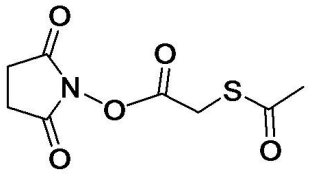
SATA Protocol and Product Information Sheet

Product Category:	Protein Modification Reagents
Catalog Number(s):	m3100-100mg, m3100-1gm, m3100-custom
Product Name:	SATA Protein Modifier
Alternative Name(s):	N-Succinimidyl S-acetyl thioacetate
CAS Number:	76931-93-6
Chemical Formula:	$C_8H_9NO_5S$
Molecular Weight:	231.23
Spacer Arm Length:	2.8 Å



SATA Labeling Protocol

1. Dissolve protein in buffer at 50 to 100 µM in Sodium Phosphate buffer, pH 7.4. Note: Do not use amine containing buffers, such as Tris or glycine. Avoid elevated pH. Optimum pH is between pH 7.0 and 8.2.
2. Create a SATA stock solution by dissolving 5-10 mg of SATA in 0.5 mL of DMSO or DMF. (SATA is also soluble in acetonitrile or warm water at lower concentrations).
3. Combine 1.0 mL of protein solution with 10 µL of SATA stock. (Giving approximately a 10:1 molar ratio of SATA to protein).
4. Allow reaction to proceed at room temperature for 30 to 60 minutes or longer if reaction must be done at 4°C (2 hours should be sufficient).
5. Desalt sample to remove residual SATA (i.e. gel filtration or dialysis, etc.).

SATA Deprotection Protocol

1. Create a deprotection solution: 1.0 M Hydroxylamine, 50 mM EDTA in the same buffer as used to dissolve protein (50 – 100 mM Sodium Phosphate or other).
2. To 1-2 mL of the modified protein solution, add 50 µL of the deprotection solution.
3. Desalt sample to remove residual hydroxylamine and deacylation products (i.e. gel filtration or dialysis, etc.). Note: It is preferred that you work quickly to avoid disulfide formation. For this reason, gel filtration with an EDTA containing buffer is preferred. Generally, only 5 – 10 mM EDTA is required.

References:

Duncan, R.J.S., et al. 1983, *Anal. Biochem.* 132, 68.

King, T.P., Kochoumian, L. 1979, *J. Immunol. Methods.* 28, 201-210.

Weston, P.D., et al. 1980, *Biochem. Biophys. Acta.* 612, 40-49.

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