

2-Iodoacetamide

Cat. # P1052-5, P1052-25, P1052-100

Also Known as:	Iodoacetamide
Formula:	C ₂ H ₄ INO
MW:	184.96 g/mol
CAS No.:	144-48-9
Source:	Synthetic
Form:	Powder
Solubility:	Soluble in water
Quality Assurance:	> 98% by HPLC and NMR

Description: Iodoacetamide is an alkylation agent by reacting with histidine, methionine and sulfhydryl groups of proteins. It is an irreversible inhibitor of all cysteine proteases by alkylation of the catalytic cysteine residue, including deubiquitinating enzymes (DUBs), Cathepsin B, and beta-Amylase. It also inhibits ribonuclease by reacting with histidine residues (occurring at a much slower rate than cysteine). Under limiting quantities and a slightly alkaline pH, Iodoacetamide exclusively reacts with cysteines in proteins.

Storage: Eligible for room temperature shipping. Store at -20°C upon receiving. Avoid moisture and light. Compound color may change from white to yellowish during storage.

Note: 1) Iodoacetamide is unstable and light sensitive. Solutions should be prepared fresh for each use. 2) Prepare stock solution in water at 100-500mM. 3) The typical concentration for inhibiting proteases in lysates is 0.1-2mM. 4) Access Iodoacetamide after alkylation can be neutralized by adding reducing agent, such as DTT.

Literature: 1. Benesch, R. and Benesch, R.E., *Biochim. Biophys. Acta*, 23, 643 (1957).
2. Gurd, F.R.N., *Methods Enzymol.*, 25, 424 (1972).