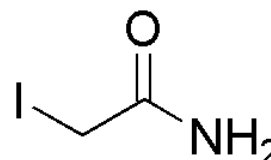


Iodoacetamide

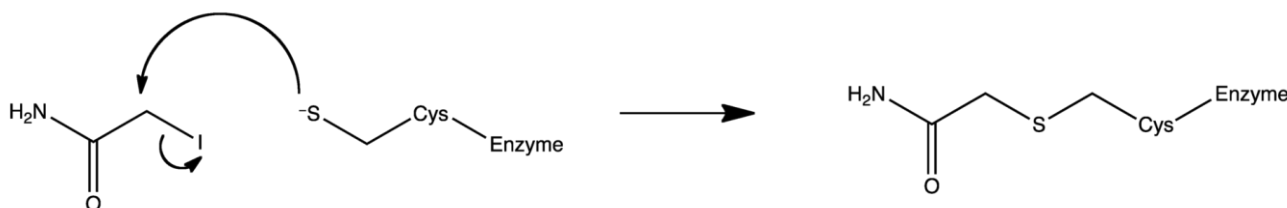
Alkylating agent used for peptide mapping purposes

Catalog number: 020482, 5 g 020483, 25 g
 Name: 2-Iodoacetamide
 α -Iodoacetamide
 Formula : C_2H_4INO ; CAS: 144-48-9; MW= 185.0
 Melting Point : 91 - 95 °C
 Storage : 0-8°C



Application

Alkylating reagent for cysteine residues in peptide sequencing. Its actions are similar to those of iodoacetate. It is commonly used to bind covalently with the thiol group of cysteine so the protein cannot form disulfide bonds. By reaction with the thiol group of cysteine, it is an irreversible inhibitor of enzymes with cysteine at the active site. It reacts much more slowly with histidine residues, but that activity is responsible for inhibition of ribonuclease. Also used in ubiquitin studies as an inhibitor of deubiquitinase enzymes (DUBs) because it alkylates the cysteine residues at the DUB active site.



Mechanism of irreversible inhibition of cysteine peptidases with iodoacetamide.

Literature References:

1. Smythe CV, The reactions of Iodoacetate and of Iodoacetamide with various Sulfhydryl groups, with Urease, and with Yeast preparations. *J. Biol. Chem.* 114 (3): 601–12 (1936)
2. Anson ML, The reactions of Iodine and Iodoacetamide with native Egg Albumin, *J. Gen. Physiol.* 23 (3): 321–31 (1940)

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