Chymotrypsin

Cat. No.: HY-108910

CAS No.: 9004-07-3

Target: Ser/Thr Protease

Pathway: Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
In solvent	-80°C	6 months
	-20°C	1 month

Chymotrypsin

SOLVENT & SOLUBILITY

In Vitro	DMSO : 50 mg/mL (Need ultrasonic)
In Vivo	1. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (Infinity mM); Clear solution

BIOLOGICAL ACTIVITY

Description	Chymotrypsin (Chymotrypsin A) is a serine protease produced by the pancreas. Chymotrypsin cleaves protein chains at the carboxyl side of aromatic amino acids[1][2].
In Vitro	Recommended to reconstitute in 1mM HCl at 10 mg/mL and add 2 mM calcium chloride as stabilizer. Resuspended Chymotrypsin can be stored for up to one week at 4□. Preparation of Protein 1. Solubilization/Denaturation: Dissolve protein in 100mM Tris-HCl, 10mM $CaCl_2$ (pH 8.0). Proteins that are difficult to dissolve or require denaturation for efficient digestion can be solubilized in a minimum volume in a denaturant such as 6-8M urea or 6M guanidine HCl at room temperature to 37□ for up to one hour. For some proteins, it may be beneficial to heat the sample to 60□ over this time period (95□ for 15-20 minutes for extreme cases). 2. Disulphide Reduction: To the dissolved protein add DTT (or β-mercaptoethanol) to a final concentration of 5mM; heat this sample at 50-60□ for 20 minutes. 3. Alkylation: Allow the reduced protein mixture to cool to room temperature, and add iodoacetamide to a final concentration of 15mM. Incubate in the dark for 15 minutes at room temperature. 4. Finally adjust the reaction volume with 100mM Tris-HCl, 10mM $CaCl_2$ (pH 8.0) such that the urea or guanidine concentration is 1M or less. Enzyme Reconstitution Dissolve Chymotrypsin in 1mM HCl. We recommend a final concentration 0.5-1 μg/μL. Digestion Add Chymotrypsin to a final protease:protein ratio of 1:200 to 1:20 (w/w), and incubate sample for 2-18 hours at 25□. The reaction may be stopped, if desired, by adding 0.5% trifluoroacetic acid.

	MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. W.R. Terra, et al. 4.5 - Biochemistry of Digestion, Editor(s): Lawrence I. Gilbert, Comprehensive Molecular Insect Science, Elsevier, 2005, Pages 171-224.

[2]. Steven W. Cotton. Chapter 33 - Evaluation of exocrine pancreatic function, Editor(s): William Clarke, Mark A. Marzinke, Contemporary Practice in Clinical Chemistry (Fourth Edition), Academic Press, 2020, Pages 573-585.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA