SUPPORTING INFORMATION

Influence of N_{ε}-protecting groups on the protease-catalyzed oligomerization of L-Lysine methyl ester

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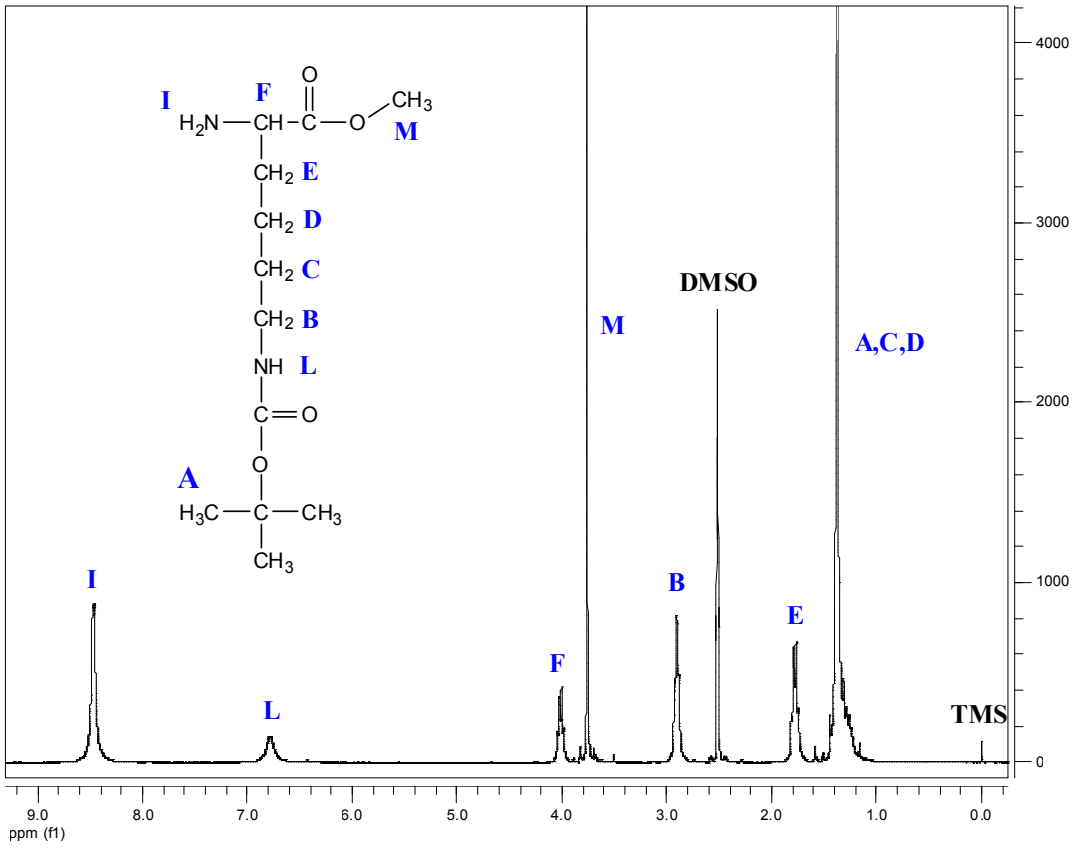

Figure S1. ^{1}H-NMR (300 MHz, DMSO-d_6) spectra of N_{ε}-Boc-L-lys-OMe.

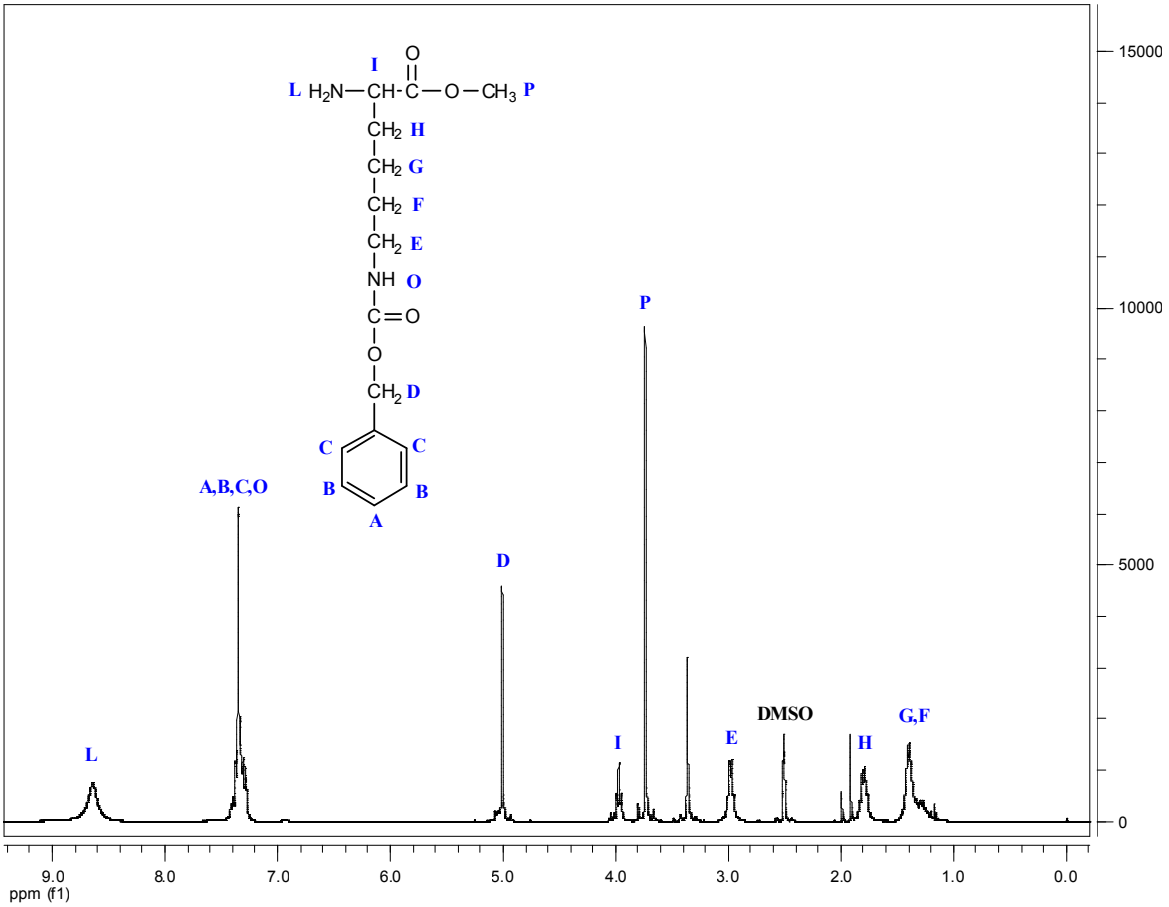

Figure S2. ^{1}H-NMR (300 MHz, DMSO-d_6) spectrum of N_{ε}-Z-L-lys-OMe.

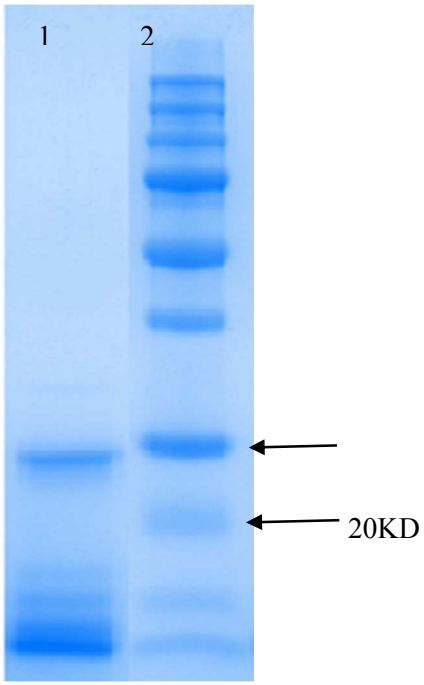

Figure S3. SDS PAGE analysis of: 1) crude papain extract (2 mg/mL), 2) protein molecular weight ladder.

Determination of papain content in the crude enzyme extract

A solution of the crude papain extract (1 mg/mL) was prepared in 0.5M phosphate buffer (pH 7) and the protein concentration was determined by the BCA protein assay using Bovine serum albumin (BSA) as the standard. The crude extract was found to contain 15% protein. The relative papain content of the protein was determined using SDS PAGE analysis. A solution containing 2 mg/mL of the crude papain extract in 8M urea (to avoid proteolysis) was loaded on the 12% polyacrylamide gel. After reduction using bismercapto ethanol in the SDS PAGE sample buffer the gel was run at 110V for 115 min at 4 ^{o}C. Staining to visualize proteins was performed using Bio-safe coomassie blue stain from Biorad. The papain band expected at about 21 KD was identified between the 20KD and 25KD bands on the protein molecular weight ladder. Based on the relative intensity of the bands in the protein fraction visualized by SDS PAGE papain purity in the protein fraction is 18%. Consequently, based on the cumulative results from BCA and SDS PAGE, the overall papain content in the crude enzyme powder is 2.7%.