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EXPRESSION AND PURIFICATION OF C-TERMINAL REGION OF PI31 PROTEIN TO INHIBIT 20S PROTEASOME ACTIVITY

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The proteasome inhibitor PI31 protein is 271 amino acid residues long and contains N-terminal globular domain and C-terminal proline-rich domain. The proteasome inhibition is conferred by the C-terminal proline-rich domain of PI31. *E. coli* recombinant expression construct of a fusion protein 6His-cPI31 consisting of C-terminal domain of PI31 (151–271 a. a.) and the N-terminal His-tag was made. The expressed protein was purified using nickel-agarose affinity chromatography. The recombinant protein 6His-cPI31 inhibited chymotrypsin-like activity of 20S proteasome, but not 26S-proteasome *in vitro*.

Keywords: proteasome inhibitor PI31, proteasome, proteolysis