

Production of a rice proteasome subunit type 2 OsPa2 for structure determination by NMR

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Abstract

Proteasome plays important roles in the degradation of intracellular proteins, regulation of metabolism, and cell division. Here, we investigated an optimum protocol to express and purify *Oryza sativa* proteasome subunit type 2 (OsPa2) which encodes a protein consisting of 126 amino acids. The recombinant protein with additional 20 amino acids containing an N-terminal six his-tag was isotopically labeled in minimal medium containing $^{15}\text{NH}_4\text{Cl}$. Employing ^{15}N - ^1H heteronuclear single quantum coherence NMR, the folding condition of OsPa2 was investigated. The well dispersed spectrum revealed that the protein exists as a monomer and is enough to perform further triple resonance NMR experiments1).

Reference

1. F. Delaglio, S. Grzesiek, G.W. Vuister, G. Zhu, J. Pfeifer, A. Bax. A multi-dimensional spectral processing system based on UNIX pipes (1995). *J. Biomol. NMR* 6:277-293.