Discovery, Structure and Tentative Functions of a C-terminal propeptide of Vacuolar Potato Lipases (Patatins)

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Potato tuber patatins amount to 25-40% of potato tuber protein. They are dimers of ca. 90 kDa with N-glycosylation. The deduced N-linked glycan structure of patatin (Figure 1) is very similar to patatin pat1-k1 through pat4-k1 as discussed, but they are also bound to and cleaved by a vacuolar processing enzyme. We analyzed the interactions of the basic helical C-terminal residues of mature patatin (Figure 3). The amino acid sequence of pat-17 from *Solanum carthayophorum* is very similar to patatin pat1-k1 through pat4-k1 from *Solanum tuberosum* cv Kuras. A recombinant form was expressed in E. coli with a N-terminal histidine tag and the pre-propeptide (Figure 1). The structure shows the pre-propeptide sticking out from the N-terminal end of the molecular surface. Therefore, the C-terminal residues of mature patatin are exposed to the medium and are present in the C-terminal region. The N-terminal region of the pre-propeptide is not exposed to the medium, as discussed.

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**References and Acknowledgements**


**Protein Sequencing of Mature Patatins**

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