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Effects of environmental factors on C-type lectin recognition to
zooxanthellae in the stony coral *Pocillopora damicornis*

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Abstract

C-type lectin is a superfamily of Ca^{2+} -dependent carbohydrate-recognition proteins that play significant roles in nonself-recognition and pathogen clearance. In the present study, a C-type lectin (PdC-Lectin) was chosen from stony coral *Pocillopora damicornis* to understand its recognition characteristics to zooxanthellae. PdC-Lectin protein contained a signal peptide and a carbohydrate-recognition domain with EPN motif in Ca^{2+} -binding site 2. The PdC-Lectin recombinant protein was expressed and purified *in vitro*. The binding of PdC-Lectin protein to zooxanthellae was determined with western blotting method, and the bound protein to $10\text{-}10^5$ cell mL^{-1} zooxanthellae was detectable in a concentration-dependent manner. Less PdC-Lectin

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