

Angiotensin I Converting Enzyme (ACE) Inhibitory Peptide Derived from the Sauce of Fermented Blue Mussel, *Mytilus edulis*

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ABSTRACT

Angiotensin I converting enzyme (ACE) is important in the maintenance of blood pressure. ACE (peptidyl dipeptide hydrolase EC 3.4.15.1) can raise blood pressure by converting angiotensin I to the potent vasoconstrictor angiotensin II. ACE is a multifunctional enzyme which also catalyses the degradation of bradykinin, and enkephalins. In present study, we isolated and purified an angiotensin I converting enzyme inhibitor from fermented mussel. The mussel was fermented with 25% NaCl (w/w) at 20°C for 6 months. The mixture was passed through 40-mesh sieve, desalted using Micro Acilyzer and then lyophilized. ACE inhibitory activity of fermented mussel sauce was investigated, IC₅₀ value was 1.01 mg/ml. ACE inhibitor was purified from fermented mussel sauce using Sephadex G-75 gel chromatography, SP-Sephadex C-25 ion exchange chromatography and reverse-phase HPLC on C18 column. The final purified inhibitor had an ACE IC₅₀ value of 19.34 g/ml, and N-terminal amino acid sequence was EVMAGNLYPG.