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Antihypertensive Action of the Orally Administered Protease Hydrolysates of Chum Salmon Head and Their Angiotensin I-Converting Enzyme Inhibitory Peptides

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The antihypertensive action of protease hydrolysates derived from chum salmon head was investigated by oral administration to spontaneously hypertensive rats (SHR), and the angiotensin I-converting enzyme (ACE) [EC 3.4.15.1] inhibitory peptides were isolated from them. Hydrolysates by Biopurase SP-10 showed the highest ACE inhibitory activity *in vitro*. The systolic blood pressure of SHR treated with the hydrolysates orally decreased from 200.6±5.0 to 177.2±9.9 (0.05<*p*<0.1) 24 h after administration. From the hydrolysates, two peptides having ACE inhibitory activity were isolated. Their amino acid sequence was Gly-Ile-Gly and Asp-Trp and had the IC₅₀ values of 730 μM and 13 μM, respectively. Asp-Trp was one of the strongest ACE inhibitory dipeptides ever reported in food protein hydrolysates.

Keywords: [antihypertensive action](#), [chum salmon](#), [hydrolysate](#), [ACE inhibitory peptides](#)



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