Antihypertensive effects of Undaria pinnatifida (wakame) peptide on blood pressure in spontaneously hypertensive rats.

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Abstract

We examined the angiotensin I-converting enzyme (ACE) inhibitory activity and antihypertensive effect of the hot water extract of wakame, Undaria pinnatifida. Ten dipeptides were isolated from the extract by several steps of chromatography, and their amino acid sequences were Tyr-His, Lys-Trp, Lys-Tyr, Lys-Phe, Phe-Tyr, Val-Trp, Val-Phe, Ile-Tyr, Ile-Trp, and Val-Tyr. Both single administration and repeated oral administration of synthetic Tyr-His, Lys-Tyr, Phe-Tyr, and Ile-Tyr significantly decreased blood pressure in spontaneously hypertensive rats.