

Effects of extraction solvents on phenolic contents, antioxidant and anticancer activities of *Prunella vulgaris* var. *lilacina*

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In this study, we investigated the antioxidant and anticancer activities of ethanol extract from *Prunella vulgaris* var. *lilacina* and its fraction. Total phenolic contents of ethanol extract and water fraction of *P. vulgaris* var. *lilacina* were 303.66 and 322.80 mg gallic acid equivalents/g dry weight, respectively. Subsequently, the antioxidant activities of ethanol extract and solvent fractions were analyzed employing various antioxidant model systems including DPPH radical scavenging activity; FRAP activity; ABTS activity; SOD activity and production of reactive oxygen species. And anticancer activity was also tested using HepG2, HT29, A549, MKN45 and HeLa cancer cell lines. The ethanol extract and water fraction of *P. vulgaris* var. *lilacina* had a higher antioxidant and anticancer activities than other solvent fractions similar with the result of total phenolic contents. In addition, we confirmed the major compounds of *P. vulgaris* var. *lilacina* ethanol extract which were octadecatrenoic acid, ethyl linoleolate and hexadecanoic acid. These results suggest that the ethanol extract from *P. vulgaris* var. *lilacina* and its fraction could be applicable as natural source of the antioxidant and anticancer in food and pharmaceutical industry.

Biography

Kyung-A Hwang completed her Ph.D. in 2004 from Sungkyunkwan University in Republic of Korea and postdoctoral fellow studies from Yale University School of Medicine. Currently, she has been working in Functional Food and Nutrition Division, National Academy of Agricultural Science as senior researcher. Her main area of research is the correlation of obesity, diabetes and the immune system. Currently, she is focusing on the development of new molecular bio-markers for obesity-related. She has published various renowned journals such as British Journal of Nutrition (2012), Food Chemistry (2011), Mechanisms of ageing development (2009), Journal of Immunology (2012, 2008, and 2007), Critical Reviews in Immunology (2008), etc.

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