

## 감자 유래 극성화합물의 생리활성 분석

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## Biological Activity Analysis of Potato-derived Polar Compounds

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Natural substances have various physiological activities. Substances isolated from natural substances are known to be safer and more potent than pharmaceuticals. Potatoes not only act as energy sources but also contain active ingredients such as vitamins and minerals. In particular, the potato contains a large amount of polar compounds, including the saponin in the polar compounds, and the physiological activity of the saponins, such as immunity enhancement, antioxidant and anti-inflammatory is known. In this study, the antioxidative activity of polar compounds from five potatoes was examined by chemical base anti-oxidation assay and cell based anti-oxidation assay. In the chemical base anti-oxidation assay, DPPH experiment showed activity in the order of Hongyoung, Haryung, Seohong, Sumi, and Jayoung. In the LPA experiment, IC<sub>50</sub> was lower in the order of Jayoung, Seohong, Sumi, Hongyoung, and Haryung. In the cell based anti-oxidation assay, the smallest amount of ROS was generated when the compound was derived from Haryung and hongyoung, and strong SOD activity was observed in Sumi and Jayoung. The results of this study reveal the antioxidative effect of polar compounds extracted from various kind of potatoes, which will enable the acquisition of new bioactive candidates and the establishment of new profit generation models for farmers.

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