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## A hexameric peptide purified from *Styela plicata* protects against free radical-induced oxidative stress in cells and zebrafish model

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To prepare antioxidative peptide from *Styela plicata*, nine proteases were employed for enzymatic hydrolysis, and the antioxidative activities of the hydrolysates were investigated using electron spin resonance (ESR) spectrometer. Among the hydrolysates, tryptic hydrolysate exhibited the highest antioxidative activities than those of other enzymatic hydrolysates. In order to purify a peptide having potent antioxidative properties, tryptic hydrolysate was separated using consecutive chromatographic methods, and antioxidative peptide was identified to be Leu-Pro-His-Pro-Ser-Phe (696.3 Da) by Q-TOF ESI mass spectroscopy. It scavenged peroxy, hydroxyl and DPPH radicals at the IC<sub>50</sub> values of 0.05, 1.98 and 0.17 mM, respectively. Pretreatment with the purified peptide decreased the death of AAPH-treated cells, and reduced the generation of intracellular reactive oxygen species (ROS) in a dose-dependent manner in AAPH-treated cells. Furthermore, the purified peptide significantly reduced ROS generation and cell death in zebrafish model. These results indicate that enzymatic hydrolysates of *S. plicata* protein possess potent antioxidative activity.

### Biography

Seok-Chun Ko has completed his PhD from Jeju National University and Post-doctoral studies from Pukyong National University School of Biomedical Engineering. He is the Research Professor of marine-integrated bionics Center. He has published more than 35 papers in SCI journals and has been serving as an Editorial Board Member of repute.

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