

Protective Effects of Fractional Components of *Bombyx mori* Silk Fibroin on Hydrogen Peroxide Toxicity

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Fractionated components of *Bombyx mori* silk fibroin, which were hydrolyzed with protease, were prepared using a preparative recycling HPLC system in order to evaluate the protective effects of molecular weight-controlled *B. mori* silk fibroin components on H₂O₂-injured neuronal cells. Three fractions of molecular weights ranging from 430 to 1500 were first obtained using the above mentioned HPLC recycling technique. In particular, it was found that in fractions 2 and 3, the amino acid contents of Tyr and Phe were higher than those of fraction 1. The highest protective effects of *B. mori* silk fibroin components on H₂O₂-injured neuronal cells was obtained when fraction 3 was used.