

Preventive Effects of Hochuekkito on Decline in Brain-Derived Neurotrophic Factor Serum Levels in Senescence-Accelerated Mouse Prone 10

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Abstract

The reduction of brain-derived neurotrophic factor (BDNF) is associated with Alzheimer's disease and depression. Senescence-accelerated mouse prone 10 (SAMP10), a rapid aging animal model, exhibits age-related cognitive deficits and depression-like behavior; however, it is unclear the variation of serum BDNF levels. Here, we showed that serum BDNF levels in SAMP10 were lower than those in the normal aging characteristics mouse SAM-resistant 1 (SAMR1), and Hochuekkito suppressed the decline of serum BDNF levels in SAMP10. These results suggest that SAMP10 may be used as an animal model in decreasing serum BDNF levels and Hochuekkito could prevent the age-related BDNF decline.