

쥐눈이콩 추출물의 신경세포 보호효과

이숙영*, 전홍성¹, 김성준¹, 박열¹

조선대학교 단백질소재연구센터, ¹조선대학교 생명공학과

Protective Effect of *Rhynchosia nulubilis* Extracts on PD-related neurotoxicants-induced neuronal death in SN4741 cells

Sook young Lee*, Hong Sung Chun¹, Sung Jun Kim, Yeal Park¹

Research Center for Proteineous Materials, Chosun University, ¹Department of Biotechnology, Chosun University

Objectives

The present study describes the neuroprotective effect of *Rhynchosia nulubilis* extract in human neuroblastoma, SH-SY5Y.

Materials and Methods

Materials & extraction

Seed of *Rhynchosia nulubilis* was germinated to 15 mm-length root at 20°C after presoaking in 0.05% low molecular weight soluble chitosan(5 kDa) and glutamic acid solution, respectively, for 4hr. The powder sample was extracted with ethanol at room temperature for 24h. The extracts were filtered, followed by rotary evaporator under 40°C.

Cell culture

SH-SY5Y cells were cultured in DMEM/F-12(Gibco-BRL) supplemented with 10% heat-inactivated fetal bovine serum(FBS) in 95% air and in 5% CO₂ incubator.

Measurement

Twenty-four hours following the addition of various measurements such as dieldrin, H₂O₂, rotenone or paraquat with or without pretreatment of *Rhynchosia nulubilis* extracts (10µg/ml), the percent of viable cells was determined using MTT assay.

Result

Rhynchosia nulubilis extract (non-germination, water · glutamic acid · chitosan soaking) did not show the defensive effect against dieldrin, H₂O₂ and Rotenone. However, *Rhynchosia nulubilis* extracts preferentially inhibited paraquat toxicity in SH-SY5Y cells.

Corresponding author: 이숙영 E-mail : seedbank2001@hanmail.net Tel :062-230-7567

*시험성적

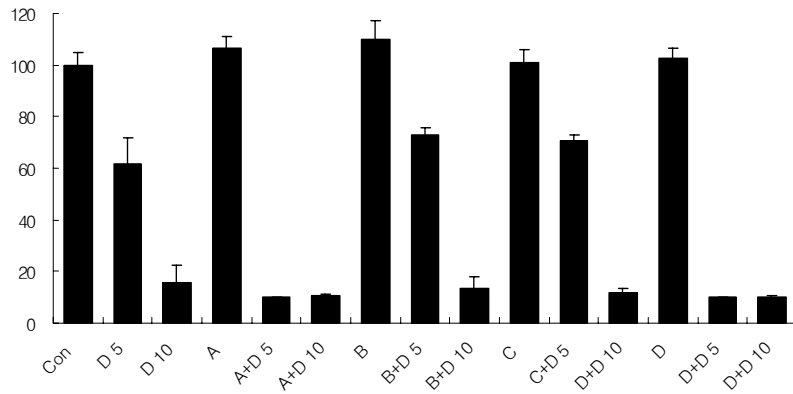


Fig. 1. Protective effect of *Rhynchosia Nulubilis* extracts on the Dieldrin-induced cell death in SH-SY5Y cells.(A;Non-germination, B;water-soaking, C; Glutamic acid soaking, D; Chitosan soaking)

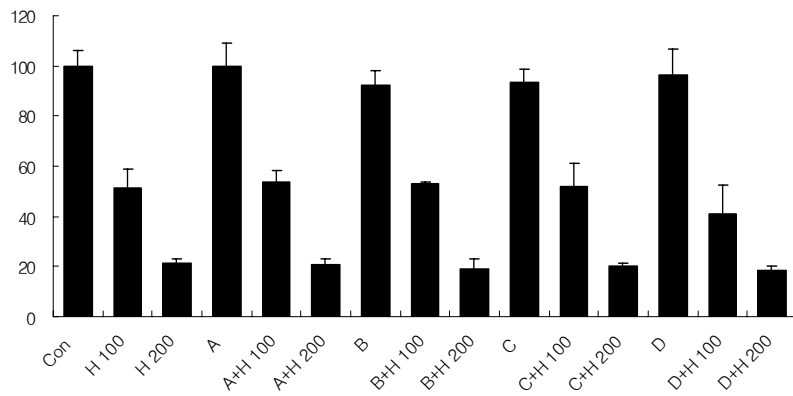


Fig. 2. Protective effect of *Rhynchosia Nulubilis* extracts on the H₂O₂-induced cell death in SH-SY5Y cells.(A;Non-germination, B;water-soaking, C; Glutamic acid soaking, D; Chitosan soaking)

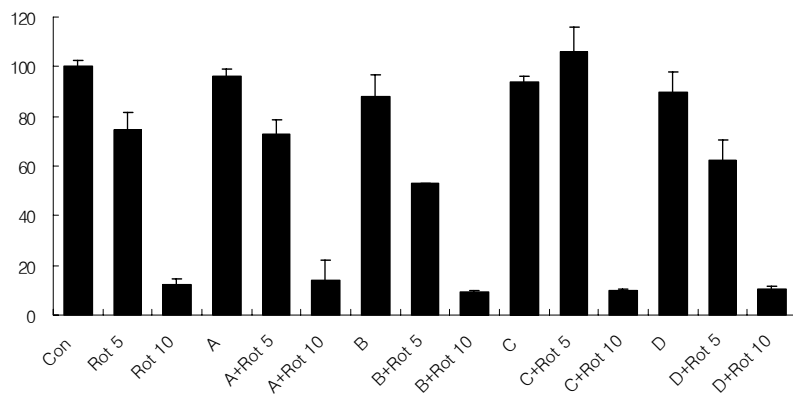


Fig. 3. Protective effect of *Rhynchosia Nulubilis* extracts on the Rotenone-induced cell death in SH-SY5Y cells.(A;Non-germination, B;water-soaking, C; Glutamic acid soaking, D; Chitosan soaking)