

# Sialic acid-binding protein from legume *Maackia fauriei*

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Sialic acid-binding proteins are potentially useful as analytical tools in studying the biological functions of sialoglycoconjugates. In the present study, a lectin was purified from *Maackia fauriei* collected at Halla Mt. in Jeju. Lectin has been obtained by extraction with 10mM Tris-HCl 0.15M NaCl, gel-filtration chromatography using Sepharose CL-6B, and fetuin-affinity column chromatography. This lectin, *M. fauriei* agglutinin (MFA), is a glycoprotein composed of four subunits with each molecular mass of approximately 30 kDa and has the pI value of 4.75-5.1. MFA was stable in temperature below 45C and the pH range from 4.04 to 7.34. The hemagglutination activity of MFA was inhibited by N-acetylneuraminic acid, Neu5Ac $\alpha$ 2-3Gal $\beta$ 1-4GlcNAc, and sialoglycoproteins. MFA exerts cytotoxic effects on human breast cancer MCF-7 cells, human melanoma G-361 cells, and human liver cancer SNU-449 cell lines but had no effect on the human colorectal cancer SNU-C1 cell line.