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Authors: Jia Qi, Sang Moo Kim



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Effects of the molecular weight and protein and sulfate content of *Chlorella ellipsoidea* polysaccharides on their immunomodulatory activity

Running title: Structure-bioactivity relationships of polysaccharides

Jia Qi, Sang Moo Kim*

Department of Marine Food Science and Technology, Gangneung-Wonju National University, Gangneung 25457, Republic of Korea

*Corresponding authors: Sang Moo Kim

Department of Marine Food Science and Technology, Gangneung-Wonju National University, 7 Jukheon-gil, Gangneung 25457, Korea

Tel: +82-33-640-2343

Fax: +82-33-640-2850

E-mail: smkim@gwnu.ac.kr

Highlights

- The deproteinized (DP₁₋₃), desulfated (DS₁₋₃), and hydrolyzed (DH₁₋₃) derivatives of *Chlorella ellipsoidea* polysaccharides were prepared by enzymatic hydrolysis, desulfation, and acid hydrolysis, respectively, of differing durations.
- M_w of the *C. ellipsoidea* polysaccharides was a key factor in the regulation of their immunomodulatory activity.
- The low M_w *C. ellipsoidea* polysaccharide derivatives was unable to stimulate RAW264.7 cells to produce NO or various cytokines because it was unable to

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