

Table S1. The chemical and monosaccharide composition of seaweed-derived polysaccharides (SDP) from *Enteromorpha prolifera*.

Items	Contents, %
Chemical composition	
Total polysaccharides	53.32
Protein	1.65
Sulfate	19.87
Uronic acid	12.66
Moisture	3.58
Unspecified compounds (lipid, salt, etc.)	8.92
Monosaccharide composition	
Glucosamine (GlcN)	50.81
Glucose (Glc)	27.70
Galacturonic acid (GalA)	11.75
Mannose (Man)	2.78
Xylose (Xyl)	2.63
Galactose (Gal)	1.95
Arabinose (Ara)	0.93
Glucuronic acid (GlcA)	0.76
Fucose (Fuc)	0.27
Galactosamine (GalN)	0.25
Ribose (Rib)	0.17

A phenol-sulfuric acid assay was used to determine the total polysaccharide content and Glc was used as a standard. Bradford's method was used to analysis the protein content and bovine serum albumin (BSA) was used as a standard. The barium sulfate-gelatin turbidimetric method was used to determine the sulfate content and potassium sulfate was used as a standard. m-Hydroxybiphenyl colorimetry was used to measure uronic acid content and d-GlcA was used as a standard. Monosaccharide composition was determined using high-performance liquid chromatography (HPLC).