

Supplementary Materials

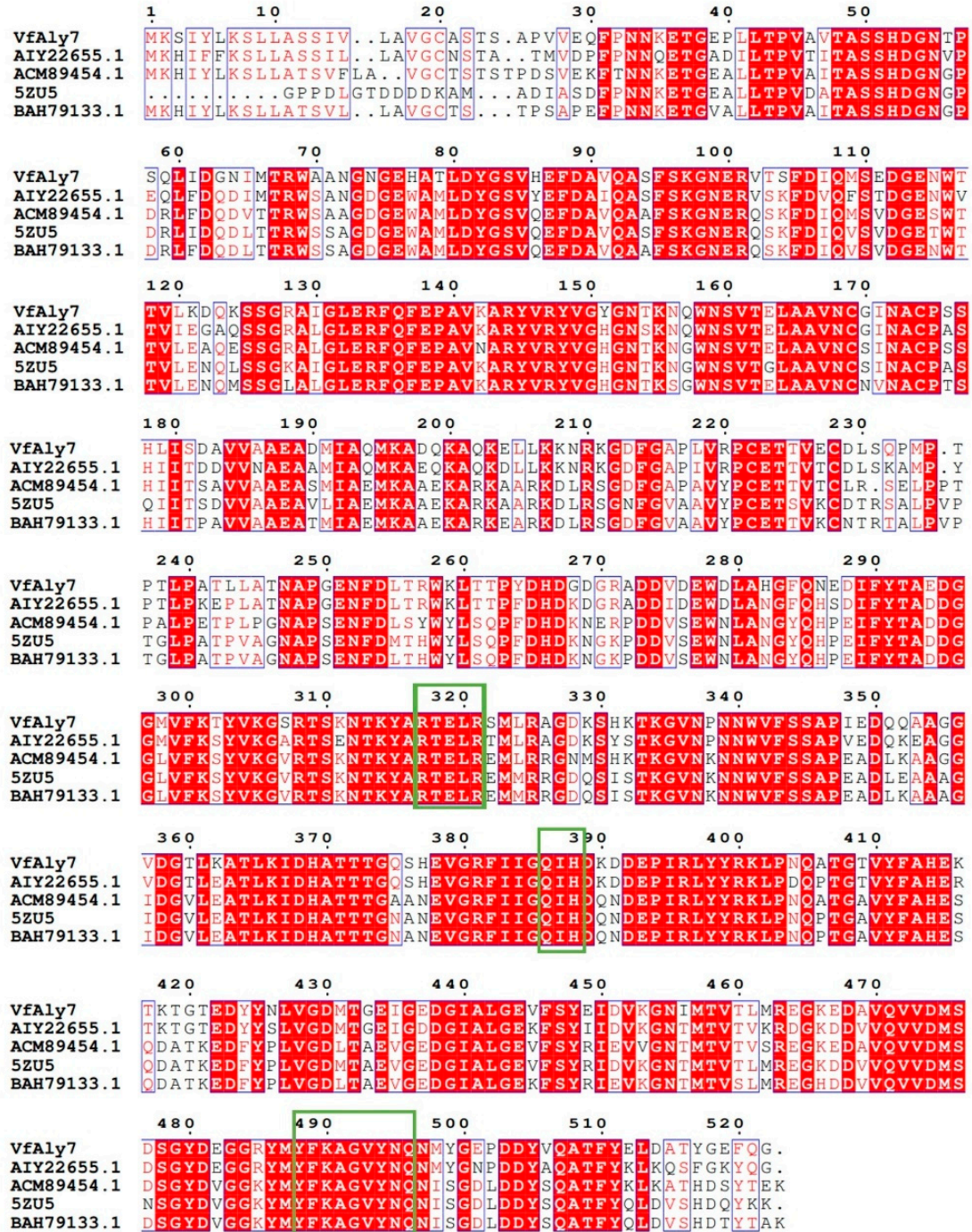
Releasing Bioactive Compounds from Brown Seaweed with Novel Cold-Adapted Alginate Lyase and Alcalase

Jun Jiang ¹, Zhengqiang Jiang ¹, Qiaojuan Yan ², Susu Han ¹ and Shaoqing Yang ^{1,*}

¹ College of Food Science and Nutritional Engineering, China Agricultural University, No.17 Qinghua East Road, Haidian District, Beijing 100083, China
² Key Laboratory of Food Bioengineering (China National Light Industry), College of Engineering, China Agricultural University, No.17 Qinghua East Road, Haidian District, Beijing 100083, China
* Correspondence: ysq@cau.edu.cn.

Table S1. Substrate Specificity of VfAly7.

Substrate	Specific activity (U/mg)	Relative activity (%)
sodium alginate	71.5	100%
poly MG	68.3	96%
poly M	47.2	66%
poly G	34.3	48%
Chitin	0	0
Agarose	0	0
mannan	0	0
CMC	0	0
cellulose	0	0



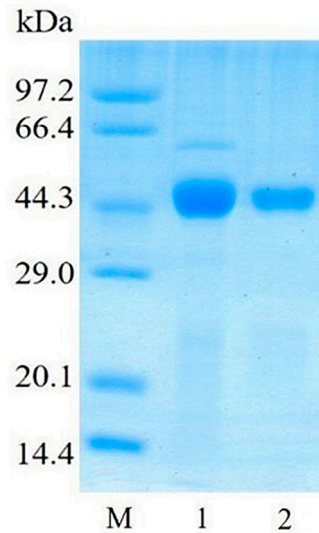


Figure S2. Purification of the recombinant VfAly7 expressed in *P. pastoris*. Lane M, low molecular weight protein standards; lane 1, crude enzyme; lane 2, purified VfAly7.

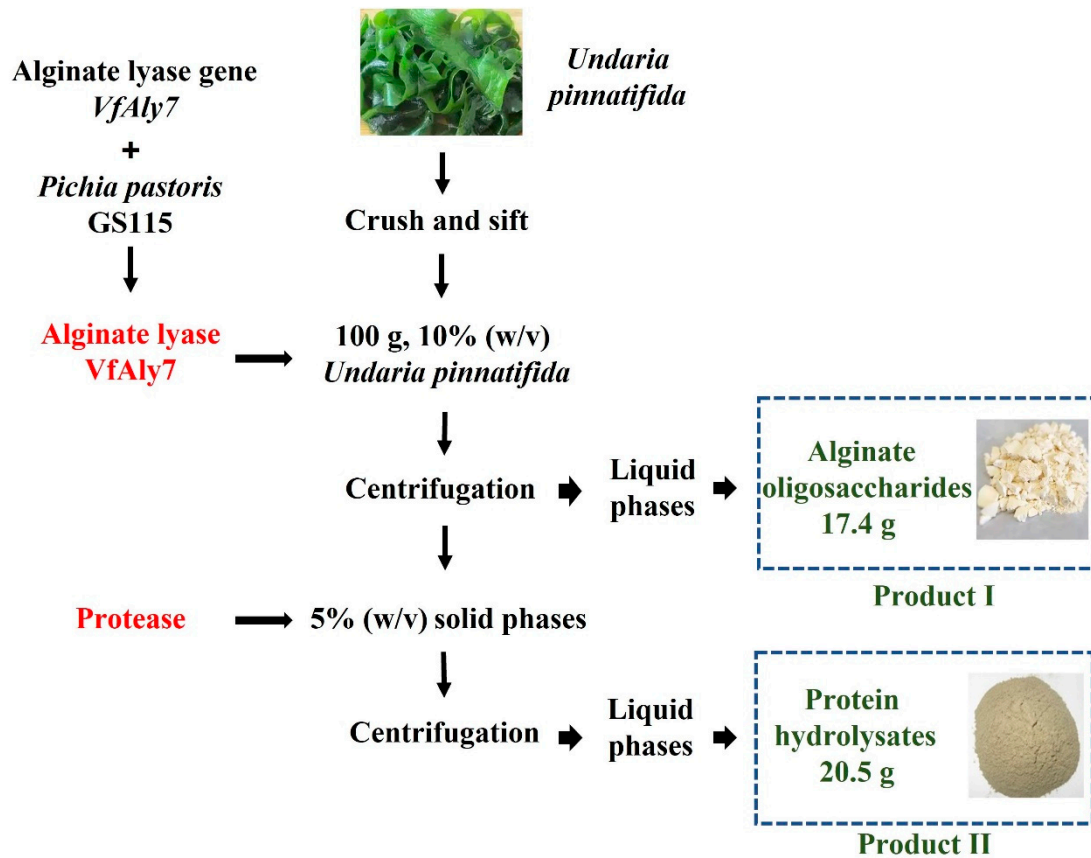


Figure S3. General scheme of the enzymatic approach for the utilization of brown seaweed (*Undaria pinnatifida*). The recoveries of alginates, proteins and minerals from brown seaweed (100 g) are indicated.