marine drugs

Supplementary materials

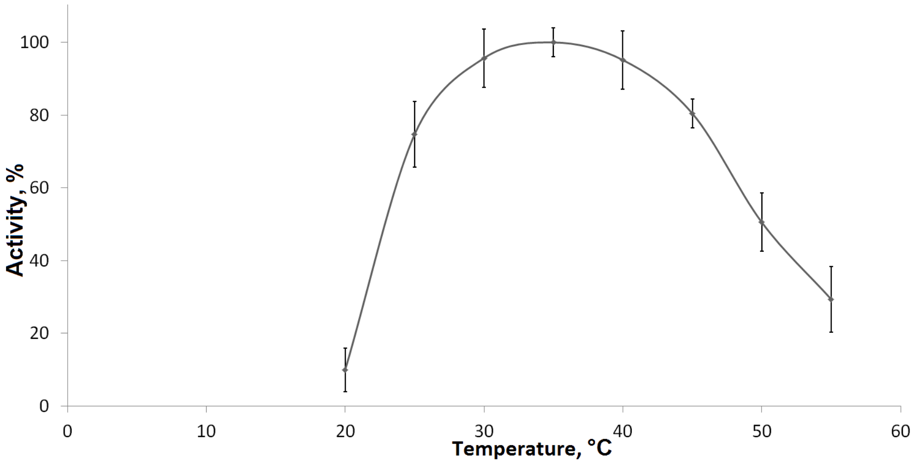

Figure S1. Optimal temperature evaluation for ALFA3. Standard deviations are given.

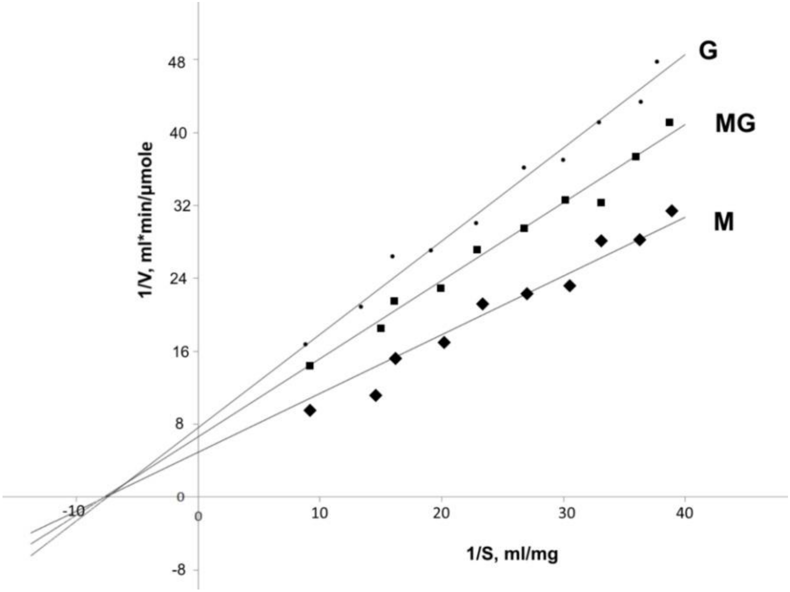

Figure S2. Lineweaver-Burk plot, visualizing Km and Vmax values for ALFA3 on three different substrates, used in the experiment.

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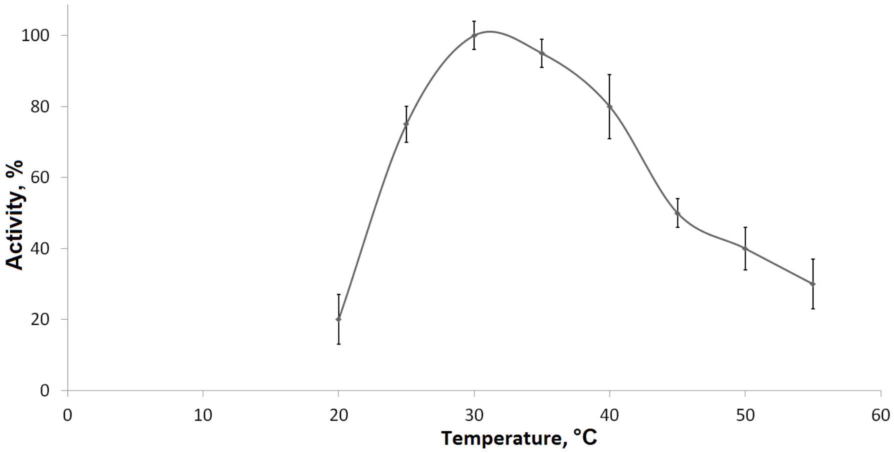

Figure S3. Optimal temperature evaluation for ALFA4. Standard deviations are given.

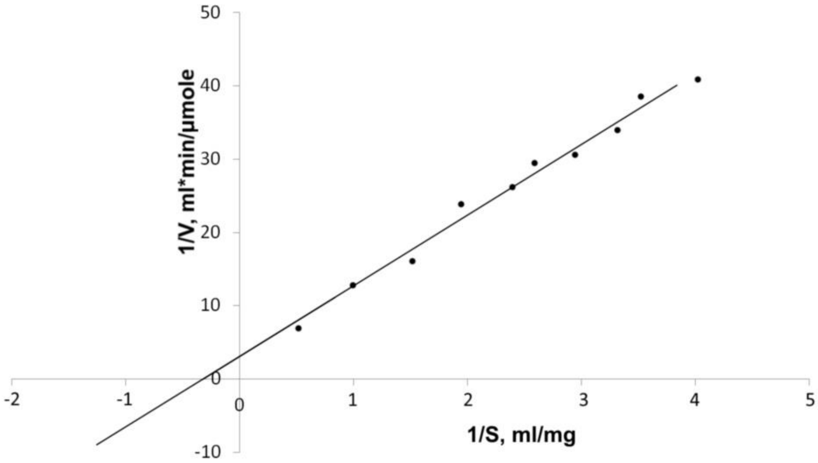

Figure S4. Lineweaver-Burk plot, visualizing Km and Vmax values for ALFA4 on mannuronare-enriched substrate.

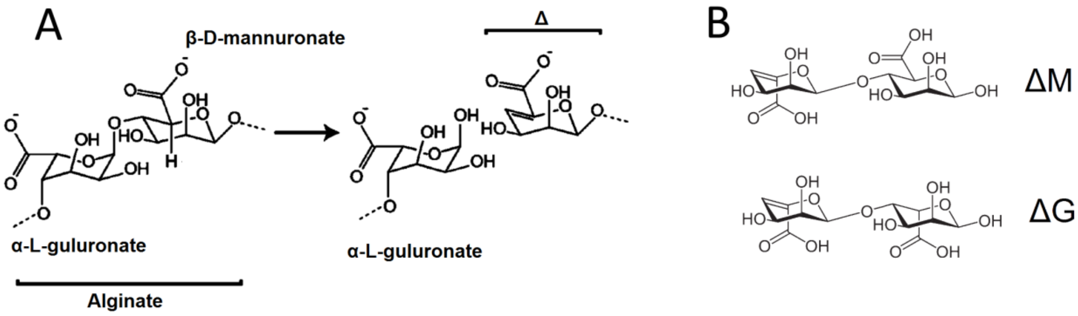

Figure S5. Typical scheme of alginate hydrolysis by alginate lyase (A), formulas of alginate disaccharides ΔM and ΔG – the patters of the variety of enzymatically produced alginate oligosaccharides (B).

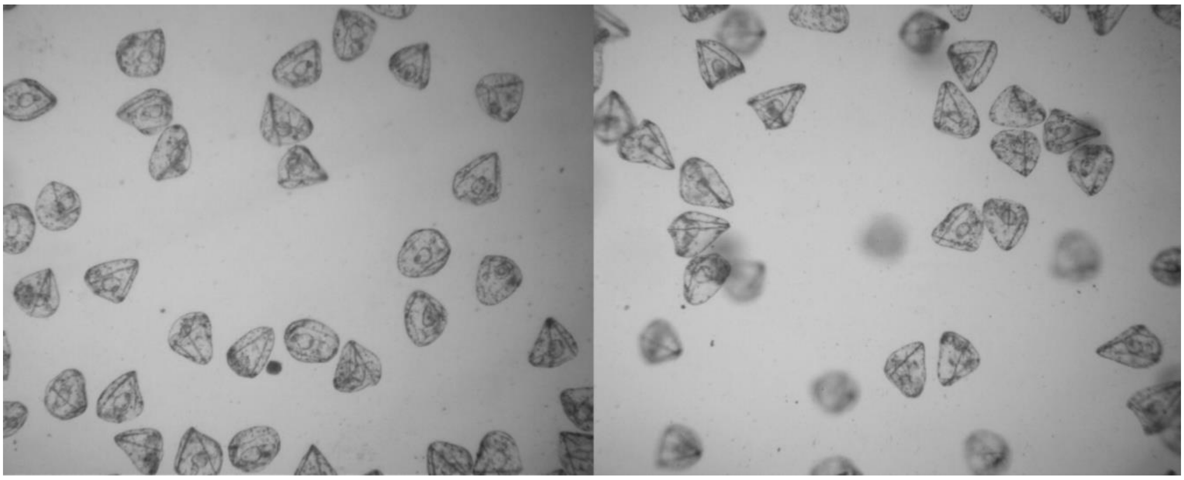

Figure S6. Sea urchin *Strongylocentrotus intermedius* embryos 36h after fertilisation. Left – typical picture of plutei after treatment, right – control. There is no significant difference between treated and control organisms that can be assumed as evidence of biological safety of alginates and alginate oligosaccharides.

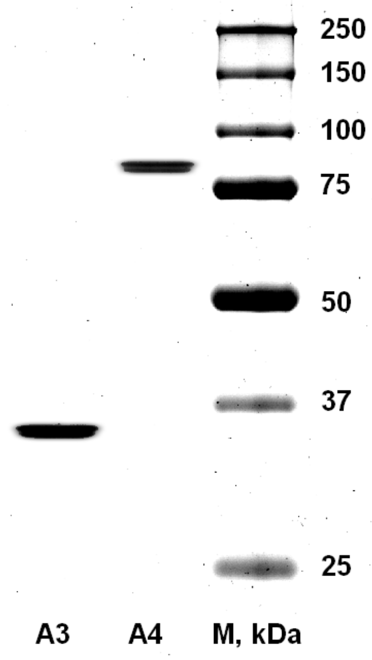

Figure S7. Electrophoresis gel photograph showing purity and molecular masses of ALFA3 (mentioned as A3) and ALFA4 (mentioned as A4) alginate lyases.