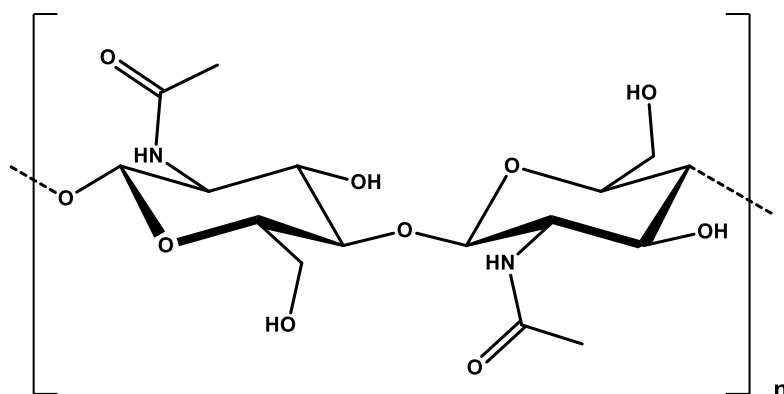# Product Data Sheet

α-Chitin, 3D-sponge scaffold

General description	α-Chitin is a biopolymer made of β-1,4 glycosidic linked acetylglucosamine monomers and the second most abundant polysaccharide. Essentially, it serves for structure formation. This is also its role in the composition of the complex scaffolds of marine sponges.
Fields of application	• Tissue Engineering (wound healing, etc.) • composite material (structural template, etc.) • support material (enzymes, catalysis, solid phase synthesis)
Specific properties	biodegradable, biocompatible, bioactive, mechanically stable
Appearance	white, fibrous network (lyophilisized)

Product properties

Chemical name (IUPAC)	(1→4)-2-acetamido-2-deoxy-β-D-glucan
Form	biopolymer
Monomer	*N*-Acetylglucosamine
Molecular formula of the monomer	$C_8H_{13}NO_5$
Molecular weight of the monomer	203.19 g/mol
CAS number	1398-61-4
PubChem CID	6857375
Solubility	insoluble
Melting point	> 300 °C (decomposition)

Degree of acetylation	> 90 %
Source	*Aplysina aerophoba*

Product notes

Storage	store dry
Handling	no special notes

THIS PRODUCT IS FOR RESEARCH USE ONLY AND IS NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE, NOT FOR USE IN HUMANS.

Product literature references

[1] K. Kurita, *Prog. Polym. Sci.* **2001**, *26*, 1921.

[2] M. Wysokowski, I. Petrenko, A. L. Stelling, D. Stawski, T. Jesionowski, H. Ehrlich, *Polymers* **2015**, *7*, 235.

[3] W. Neugebauer, R. E. Williams, J.-R. Barbier, R. Brzezinski, G. Willick, *Int. J. Peptide Protein Res.* **1996**, *47*, 269.

[4] R. Jayakumar, K. P. Chennazhi, S. Srinivasan, S. V. Nair, T. Furuike, H. Tamura, *Int. J. Mol. Sci.* **2011**, *12*, 1876.

[5] H. Ehrlich, H. Worch, *Porifera Research: Biodiversity, Innovationn and Sustainability* **2012**, 303.

[6] M. Wysokowski, M. Motylenko, V. V. Bazhenov, D. Stawski, I. Petrenko, A. Ehrlich, T. Behm, Z. Kljajic, A. L. Stelling, T. Jesionowski, H. Ehrlich, *Front. Mater. Sci.* **2007**, *7*, 248.