

PRODUCT INFORMATION



Hexa-N-acetylchitohexaose

Item No. 17864

CAS Registry No.: 38854-46-5
Formal Name: O-2-(acetylamino)-2-deoxy-β-D-glucopyranosyl-(1→4)-O-2-(acetylamino)-2-deoxy-β-D-glucopyranosyl-(1→4)-O-2-(acetylamino)-2-deoxy-β-D-glucopyranosyl-(1→4)-O-2-(acetylamino)-2-deoxy-β-D-glucopyranosyl-(1→4)-O-2-(acetylamino)-2-deoxy-β-D-glucopyranosyl-(1→4)-O-2-(acetylamino)-2-deoxy-β-D-glucopyranosyl-(1→4)-O-2-(acetylamino)-2-deoxy-β-D-glucose

Synonyms: N-Acetylchitohexaose, NACOS-6

MF: C₄₈H₈₀N₆O₃₁

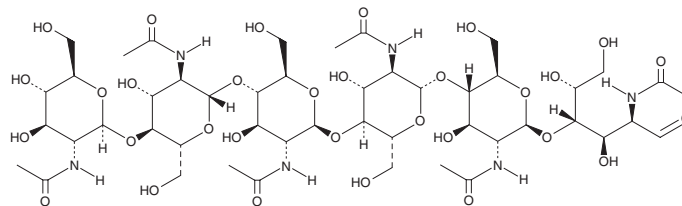
FW: 1,237.2

Purity: ≥95%

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Hexa-N-acetylchitohexaose is supplied as a crystalline solid. Aqueous solutions of hexa-N-acetylchitohexaose can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of hexa-N-acetylchitohexaose in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Hexa-N-acetylchitohexaose is a hexamer of N-acetylglucosamine, a subunit of the natural polymer chitin. It functions as an elicitor in plants, inducing the expression of chitinases.^{1,2} Like chitin and some of its derivatives, hexa-N-acetylchitohexaose is a substrate of lysozyme.³ It also binds LysM domains on certain proteins, including an endopeptidase of *T. thermophilus*.⁴ Hexa-N-acetylchitohexaose heightens the immune response against *Pseudomonas* and *Listeria* in mice, stimulates cytokine secretion in mesenchymal stem cells, and inhibits nitric oxide production by activated macrophages.⁵⁻⁸

References

1. Inui, H., Yamaguchi, Y., and Hirano, S. *Biosci. Biotechnol. Biochem.* **61(6)**, 975-978 (1997).
2. Gao, Y., Zan, X.L., Wu, X.F., et al. *Plant Sci.* **215-216**, 190-198 (2014).
3. Ouyang, Z., Takáts, Z., Blake, T.A., et al. *Science* **301(5638)**, 1351-1354 (2003).
4. Wong, J.E.M.M., Midtgaard, S.R., Gysel, K., et al. *Acta Crystallogr. D Biol. Crystallogr.* **71(Pt 3)**, 592-605 (2014).
5. Tokoro, A., Kobayashi, M., Tatewaki, N., et al. *Microbiol. Immunol.* **33(4)**, 357-367 (1989).
6. Okawa, Y., Kobayashi, M., Suzuki, S., et al. *Biol. Pharm. Bull.* **26(6)**, 902-904 (2003).
7. Lieder, R., Thormodsson, F., Ng, C.H., et al. *Int. J. Biol. Macromol.* **51(4)**, 675-680 (2012).
8. Hwang, S.-M., Chen, C.-Y., Chen, S.-S., et al. *Biochem. Biophys. Res. Commun.* **271(1)**, 229-233 (2000).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/19/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM