3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone (800) 325-5832 (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

ProductInformation

# Endoglycosidase H
# from *Streptococcus griseus*

Product Number **E 2406**
Storage Temperature –20 °C

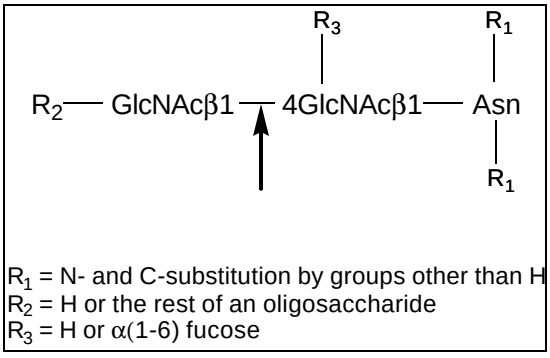
CAS# 37278-88-9
EC 3.2.1.96
Synonyms: β-N-Acetylglucosaminidase H; Endo H; Endo-β-N-acetylglucosaminidase H

## Product Description

One of the distinguishing features of the proteome in eurkaryotic cells is that most proteins are subject to post-translational modification, of which glycosylation is the most common form. It is estimated that more than half of all proteins are glycoproteins. Two major classes of oligosaccharides (glycans) may be attached to proteins. N-linked glycans are attached to the amide side chain of Asn residues, which form part of the consensus sequence AsnXaaSer/Thr, while O-linked glycans may be added to the hydroxyl side chain of Ser or Thr residues.

The core structure and compositon of N-linked glycans are different from those of O-linked glycans. The core structure of N-linked glycans is shown in Figure 1.

**Figure 1.**
Core Structure of N-linked Glycans




$R_1$ = N- and C-substitution by groups other than H
$R_2$ = H or the rest of an oligosaccharide
$R_3$ = H or α(1-6) fucose

Endoglycosidase H cleaves between the N-acetyl-glucosamine residues of the chitobiose core of N-linked glycans, leaving one N-acetylglucosamine residue attached to the asparagine.

The specificity of this enzyme is such that oligomannose and most hybrid types of glycans, including those that have a fucose residue attached to the core structure, are cleaved, while complex type glycans are not released. Endoglycosidase H is extremely useful for selective release of oligomannose or hybrid type glycans from glycoproteins. The enzyme has found extensive use in the characterization of glycoproteins[1-3] and the biosynthetic pathway for N-glycosylation.[4] The action of endoglycosidase H against native N-linked glycans on a glycoprotein can be assessed by a reduction in molecular weight leading to a change in the migration of the protein during SDS-PAGE.

Endoglycosidase H from *Streptomyces griseus* has a molecular weight of ~29 kDa.

The workable pH range is between 5.0 to 6.0, with the optimal pH at 5.0.

The enzyme is supplied as a powder lyophilized from a solution containing 10 mM Tris HCl, pH 7.2. This product **does not contain a protein stabilizer** and must be reconstituted with a solution containing BSA or another stabilizer.

Endoglycosidase H is tested and confirmed negative for contaminating activities of other endo- and exo-glycosidases. Trace protease activity was detected.

Unit Definition: One unit will hydrolyze 1.0 µmole of N-acetyl-($^{14}$C)Asn(GlcNAc)$_2$(Man)$_5$ per minute at pH 5.0 at 37 °C.

## Preparation Instructions

Dissolve the enzyme in 0.1 ml of a solution containing 0.1% bovine serum albumin to prepare a 1 unit/ml solution.

**Precautions and Disclaimer**
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

**Storage/Stability**
It is recommended to store the product at –20 °C. After reconstitution, aliquot and store the solution at –20 °C

**References**

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