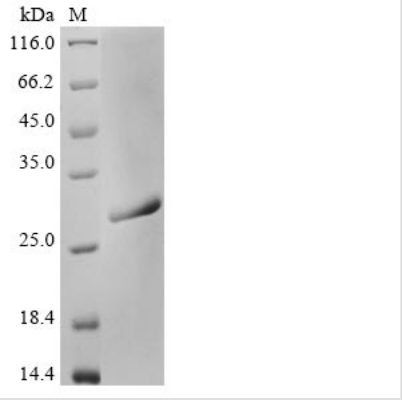
Recombinant Endo-beta-N-acetylglucosaminidase H, partial

Product Code	CSB-YP356191SPF
Abbreviation	Recombinant Endo-beta-N-acetylglucosaminidase H protein, partial
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P04067
Form	Liquid or Lyophilized powder
Storage Buffer	If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose.
Product Type	Recombinant Protein
Immunogen Species	Streptomyces plicatus
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	APVKQGPTSVAYVEVNNNSMLNVGKYTLADGGGNAFDVAVIFAANINYDTGTK TAYLHFNENVQRVLDNAVTQIRPLQQQGIKVLLSVLGNHQGAGFANFPSQQAA SAFAKQLSDAVAKYGLDGVDFDDEYAEYGNNGTAQPNDSSFVHLVTALRANM PDKIISLYNIGPAASRLSYGGVDVSDKFDYAWNPYYGTWQVPGIALPKAQLSP AAVEIGRTSRSTVADLARRTVDEGYGVYLTYNLDGGDRTADVSAFTRELYGSE AVRTP
Research Area	Biochemicals
Source	Yeast
Target Names	N/A
Expression Region	45-313aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	C-terminal 6xHis-tagged
Mol. Weight	31.2 kDa
Protein Length	Partial
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

Recombinant Endo-beta-N-acetylglucosaminidase H from Streptomyces plicatus gets expressed in a yeast system, spanning amino acid region 45-313. This partially expressed protein includes a C-terminal 6xHis-tag, which makes purification and detection straightforward. SDS-PAGE confirms a purity level greater than 90%, suggesting it works well for various research applications that need high-quality reagents.

Endo-beta-N-acetylglucosaminidase H appears to play a critical role in modifying glycoproteins by cleaving N-linked oligosaccharides. The enzyme seems particularly significant when studying glycoprotein biosynthesis and processing. Researchers often turn to this enzyme for analyzing glycoprotein structures and functions, making it a valuable tool in biochemical research and glycomics.

Potential Applications

Note: The applications listed below are based on what we know about this protein's biological functions, published research, and experience from experts in the field. However, we haven't fully tested all of these applications ourselves yet. We'd recommend running some preliminary tests first to make sure they work for your specific research goals.

1. N-linked Glycan Structure Analysis and Deglycosylation Studies

This recombinant Endo-beta-N-acetylglucosaminidase H works as a research tool for analyzing N-linked glycan structures on glycoproteins through enzymatic deglycosylation. The enzyme specifically cleaves between the two N-acetylglucosamine residues in the chitobiose core of high-mannose and hybrid-type N-glycans. This makes it valuable for glycan structural characterization. The C-terminal 6xHis tag makes purification and immobilization simple for repeated use in glycan analysis workflows. Researchers can apply this enzyme to study glycosylation patterns in various protein samples and compare glycan structures across different expression systems.

2. Glycoprotein Mobility Shift Assays and Western Blot Analysis

The enzyme serves as a useful tool for confirming N-linked glycosylation status of target proteins through SDS-PAGE mobility shift assays. When researchers

treat glycoproteins with this endoglycosidase, they'll likely see characteristic changes in electrophoretic mobility. This allows them to distinguish between glycosylated and non-glycosylated forms. The high purity (>90%) appears to ensure reliable and reproducible results in these analytical applications. This approach proves particularly useful for validating glycosylation sites and studying how glycosylation affects protein migration patterns.

3. Preparation of Deglycosylated Protein Standards

This recombinant enzyme can generate deglycosylated protein standards for comparative studies in protein biochemistry research. Controlled removal of N-linked glycans allows researchers to study how glycosylation impacts protein properties such as stability, folding, and interactions. The 6xHis tag enables easy removal of the enzyme from reaction mixtures using metal affinity chromatography. This ensures clean preparation of deglycosylated protein products. Such standards prove valuable for mass spectrometry analysis and structural studies where glycan heterogeneity needs reduction.

4. Enzyme Activity and Specificity Studies

The recombinant protein can serve as a subject for detailed biochemical characterization studies to understand endoglycosidase mechanisms and substrate specificity. Researchers may investigate optimal reaction conditions, pH and temperature profiles, and kinetic parameters using various glycoprotein substrates. The yeast expression system might provide proper protein folding, while the His-tag makes purification for activity assays more manageable. These studies contribute to fundamental understanding of glycan-processing enzymes and their potential applications in glycobiology research.

Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.