

Product Information

α -N-Acetylgalactosaminidase from chicken liver

Product Number **A 9763**
Storage Temperature $-20\text{ }^{\circ}\text{C}$

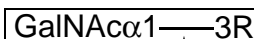
CAS# 9075-63-2
EC 3.2.1.49

Synonyms: N-Acetyl- α -galactosaminidase;
2-Acetamido-2-deoxy- α -D-galactoside,
acetamidodeoxygalactohydrolase,

Product Description

One of the distinguishing features of the proteome in eukaryotic 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.

α -N-Acetylgalactosaminidase is highly specific, cleaving terminal $\alpha(1\rightarrow3)$ -linked N-acetylgalactosamine (GalNAc) residues from glycans, glycoproteins, and glycolipids. The enzyme also cleaves GalNAc attached to serine or threonine residues in glycoproteins. The enzyme is useful for the cleavage of isolated glycoconjugates and those attached to red blood cell membranes.¹



R = carbohydrate, serine or threonine

The enzyme is isolated from an ammonium sulfate precipitate of a chicken liver extract and further purified using techniques such as ion exchange and gel filtration chromatography. The enzyme is supplied as a lyophilized powder containing <10% protein (BCA) and stabilized with trehalose, citrate, and potassium phosphate buffer salts.

Specific activity: 5 – 20 units per mg protein

Unit Definition: One unit will release 1 μ mole of p-nitrophenol from p-nitrophenyl N-acetyl- α -D-galactosaminide per minute at pH 3.65 at 37 $^{\circ}\text{C}$.

Molecular weight: 80 –100 kDa

pH optimum: 3.5 – 4.0

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.

Preparation Instructions

Before reconstitution, tap the vial gently so all the freeze-dried material is at the base of the vial. Addition of deionized water to the vial reconstitutes the enzyme in the lyophilization buffer. However, if a buffer is used for reconstitution, confirm the lyophilized salts present in the vial do not affect the final pH and other parameters.

Storage/Stability

It is recommended to store the product at $-20\text{ }^{\circ}\text{C}$. The enzyme is stable for up to 20 hours at 37 $^{\circ}\text{C}$. It is stable at 4 $^{\circ}\text{C}$ and may be frozen for long term storage.

Procedure

Deglycosylation of up to 50 μ g of glycoconjugate will require ~20 milliunits of enzyme from an enzyme solution of 1 – 2 units/ml. Incubate 16 – 24 hours at 37 $^{\circ}\text{C}$ and at pH 4.0.

References

1. Clausen, H., *et al.*, Mol. Immunol., **25**, 199 (1988).

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