Ver. HB240524

PNGase F

Product description

PNGase F is an amidase enzyme that is Cloned from Peace Station *Eliza* and mainly secreted by Neisseria meningitidis and other Gram-negative bacteria. Yeasen PNGase F is recombinantly expressed in yeast (specific activity: 100,000 U/mL), which can cleave high mannose, hybrid, and complex oligosaccharide glycoproteins linked by asparagine. The cleavage site of PNGase F is the amide bond between the inner N-acetylglucosamine (GlcNAc) and asparagine residue of glycoproteins, while converting the asparagine on the protein after enzymatic hydrolysis to aspartic acid. This product is tagged with His and is commonly used for complete deglycosylation of antibodies and related proteins.

Additionally, Yeasen also provides other types of glycosidases, such as Endo H (Cat#20414ES) and Endo S (Cat#20413ES).

Components

Number	Name	Component Composition	20407ES01	20407ES02
20407-A	PNGase F	PNGase F	15000 U	75000 U
20407-B1	Buffer 1 (10×)	5% SDS; 400 mM DTT	150 μL	750 μL
20407-B2	Buffer 2 (10×)	200 mM Tris, pH 7.5	300 μL	1500 μL
20407-B3	10% NP-40	10% NP-40 in MilliQ-H2O	300 μL	1500 μL

Properties

English synonym	PNGase F; N-Glycosidase F; N-Glycosidase F
Source	Yeast recombinant expression
Molecular Weight	36 kDa
Specific Activity	100,000 U/mL
Storage buffer	20 mM Tris-HCl pH 7.5, 50 mM NaCl, 5 mM EDTA, 50% Glycerol
Unit Definition	1 unit of enzyme activity refers to the amount of enzyme required to remove more than 95% of the carbohydrates from 10 μg denatured RNase B in a 10 μL reaction system at 37°C within 1 hour.

Storage

The product can be stored at -25 to -15°C for one year.

Instructions

1. Protein deglycosylation under denaturing conditions:

1) Add 1 μL Buffer 1 and the target glycoprotein (1-20 μg) to water, to a final volume of 10 μL;

2) Boil at 100°C for 10 min to denature, cool on ice, and centrifuge for 10 seconds;

3) Add 2 μL of Buffer 2, 2 μL of 10% NP-40, and 6 μL of deionized water, with a total reaction volume of 20 μL;

4) Add 1-2 μL of PNGase and gently mix. Incubate at 37°C for 1-3 hours.

2. Protein deglycosylation under non-denaturing conditions:

1) Add 2 μL of Buffer 2 and the target glycoprotein (1-20 μg) to water, to a final volume of 20 μL.

2) Add 2-5 μL of PNGase F and gently mix.

3) Incubate at 37°C for 4-24 hours.

Note: Most substrates can be better deglycosylated under denaturing conditions. Under non-denaturing conditions, it may be necessary to increase the amount of PNGase F and extend the incubation time.

Notes

1. PNGase F is recommended to be used with the matching buffers provided by our company, according to the operation volume recommended in our instructions. If you are short of matching buffers due to the use of the system, please consult the local sales for purchase (Cat#20407-B, includes 20407-B1 (750 μL), 20407-B2 (1500 μL), 20407-B3 (1500 μL)).

2. Please wear the necessary PPE, such lab coat and gloves, to ensure your health and safety!

3. For research use only!