Recombinant Bacteroides fragilis Endo-β-galactosidase

Cat. No. Endo-β-galactosidase-016B **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Endo-β-galactosidase from Bacteroides fragilis expressed in E. Coli
Species	Bacteroides fragilis
Source	E. coli
Description	Endo-β-Galactosidase cleaves internal β(1-4) galactose linkages in unbranched, repeating poly-N-acetyllactosamine structures. Sulfated structures such as keratan sulfate are also cleaved. Branching and/or fucosylation of the substrate may decrease or eliminate cleavage.
Form	Sterile-filtered solution
EC	3.2.1.103
Specificity	Cleaves internal β(1-4) galactose linkages in unbranched, repeating poly-N-acetyllactosamine [GlcNAc-β(1-3)Gal-β(1-4)]n structures are the preferred substrate. Sulfated structures such as keratan sulfate are also cleaved. Branching and/or fucosylation of the substrate may decrease or eliminate cleavage. Sulfation of C-6 on galactose will block cleavage. Oligosaccharidesof the neo-lacto group are cleaved at greatly educed rates depending on the deviation from the preferred substrate. For example, Gal-β(1-3) GlcNAc-β(1-3)Gal-β(1-4)Glc is cleaved at 5×10-5 the rate of keratan sulfate. Specificity is similar to the Escherichia freundii enzyme except that it is limited to cleaving N-acetyllactosamine extensions on tetraantennary structures of erythropoietin.

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Contents	60 µL aliquot of enzyme (0.9 U) in 20 mM tris-HCl, pH 7.5 1 vial reaction buffer-250mM Sodium phosphate, pH 5.8
Bio-activity	Specific Activity: > 140 U/mg Activity: > 14 U/mL
Molecular Mass	~32 kDa
Suggested usage	For glycoproteins: 1. Add up to 100 µg of glycoprotein to a tube. 2. Add 4 µL 5× buffer and water to 19 µL. 3. Add 1 µL enzyme. 4. Incubate at 37 centigrade for 2 hrs.
Unit Definition	One unit of Endo-β-Galactosidase is defined as the amount that will liberate one µmole of reducing sugar per minute at 37 centigrade and pH 5.8 from bovine corneal keratan sulfate.
pH optimum	5.8
Purity	Endo-β-Galactosidase is tested for contaminating protease as follows: 10 µg of denatured BSA is incubated for 24 hours at 37 centigrade with 2 µL of enzyme. SDS-PAGE analysis of the treated BSA shows no evidence of degradation. The production strain of E. coli has been extensively tested and does not produce any detectable glycosidases.
Applications	Endo-β-Galactosidase (EC 3.2.1.103) cleaves internal β(1-4) galactose linkages in unbranched, repeating polyN-acetyllactosamine structures. Sulfated structures such as keratan sulfate are also cleaved. Branching and/or fucosylation of the substrate may decrease or eliminate cleavage. Endo-β-Galactosidase is useful for identifying and removing poly-N-acetyllactosamine structures on many biologically important glycoconjugates.
Stability	Stable at least 24 months when stored properly. Several days exposure to ambient

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	temperature will not reduce activity. Active for at least 5 days under reaction conditions.
Storage	Store enzyme at 4 centigrade.
Storage Buffer	The enzyme is provided as a sterile-filtered solution in 20 mM Tris-HCl, pH 7.5

GENE INFORMATION

Synonyms	Endo-β-galactosidase

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