

Native E. coli beta Galactosidase protein ab79449

2 References

描述

产品名称	Native E. coli beta Galactosidase蛋白
纯度	> 97 % HPLC.
表达系统	Escherichia coli
蛋白长度	Full length protein
无动物成分	No
性质	Native
种属	Escherichia coli
描述	Native E. coli beta Galactosidase蛋白

技术指标

Our **Abpromise guarantee** covers the use of **ab79449** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

应用	Immunoassay
形式	Liquid
补充说明	<p><i>Beta Galactosidase was prepared chromatographically. This product has been sterile filtered. Beta Galactosidase is used as a control in beta-galactosidase based immunological assays.</i></p> <p>Beta-galactosidase, also called beta-gal or Beta-gal, is a hydrolase enzyme that catalyzes the hydrolysis of Beta-galactosides into monosaccharides. Substrates of different Beta-galactosidases include ganglioside GM1, lactosylceramides, lactose, and various glycoproteins. Lactase is often confused as an alternative name for Beta-galactosidase, but it is simply a subclass of Beta-galactosidase. Beta-galactosidase is an exoglycosidase which hydrolyzes the Beta-glycosidic bond formed between a galactose and its organic moiety. It may also cleave fucosides and arabinosides but with much lower efficiency. It is an essential enzyme in the human body, deficiencies in the protein can result in galactosialidosis or Morquio B syndrome. In E. coli, the gene of Beta-galactosidase, the lacZ gene, is present as part of the inducible system lac operon which is activated in the presence of lactose when glucose level is low.</p> <p>It is commonly used in molecular biology as a reporter marker to monitor gene expression. It also exhibits a phenomenon called alpha-complementation which forms the basis for the blue/white screening of recombinant clones. This enzyme can be split in two peptides, LacZ-alpha and LacZ-omega neither of which is active by itself but when both are present together, spontaneously</p>

reassemble into a functional enzyme. This property is exploited in many cloning vectors where the presence of the lacZ-alpha gene in a plasmid can complement in trans another mutant gene encoding the LacZ-omega in specific laboratory strains of E. coli. However, when DNA fragments are inserted in the vector, the production of LacZ-alpha is disrupted, the cells therefore show no Beta-galactosidase activity. The presence or absence of an active Beta-galactosidase may be detected by X-gal, which produces a characteristic blue dye when cleaved by Beta-galactosidase, thereby providing an easy means of distinguishing the presence or absence of cloned product in a plasmid.

制备和贮存

稳定性和存储

Shipped at 4°C. Store at +4°C.

Constituents: 0.42% Potassium phosphate, 10% Sucrose

常规信息

相关性

Beta galactosidase is coded by a gene (lac z) in the lac operon of Escherichia coli. It is a metalloenzyme that splits lactose into glucose and galactose. It hydrolyzes terminal, non-reducing beta-D-galactose residues in beta-D-galactosides. Activation by cations seems to be substrate dependent. K⁺, Na⁺, NH₄⁺, Rb⁺, Cs⁺ and Mn⁺⁺ all activate enzyme activity based upon the substrate used.

细胞定位

Cytoplasmic

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.cn/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors