

Zymogen Granule Membrane Protein 16 Human E. coli

Product Data Sheet

Type: Recombinant

Source: E. coli

Species: Human

Other names: ZG16, Secretory lectin ZG16

Cat. No.:

RD172229100

(0.1 mg)

Description

Total 161 AA. MW: 17.9 kDa (calculated). UniProtKB acc.no. O60844. N-Terminal His-tag (10 extra AA)

Introduction to the Molecule

Zymogen granule membrane protein 16 (ZG16) is a 16 kDa protein first identified by immunoscreening of a rat pancreatic cDNA expression library with a polyspecific antiserum raised against purified zymogen granule membranes (ZGM). ZG16 displays sequence homology especially in the carbohydrate recognition domain to the plant lectin jacalin, which recognizes terminal galactose attached to N-acetylgalactosamine by a beta1-3 linkage. According to its sequence homology with this lectin, ZG16 was considered a secretory lectin ZG16. Sequence analyses uncovered that ZG16 is highly conserved amongst mammals but also appears in many other species. Rat ZG16 was found to be highly expressed in pancreas, colon, and duodenum, where the protein was localized in the zymogen granule of pancreas. The previous reports indicated that rat ZG16 took part in the formation of zymogen granule by mediating the digested enzymes to the zymogen granule membrane in pancreatic acinar cells. Human ZG16 was shown to be highly expressed in adult liver and moderately expressed in intestine (jejunum, ileum) and colon. Moreover, ZG16 is also weakly expressed in pedunculus cerebellaris but not in other brain's regions. Owing to the specific expression pattern in human liver, ZG16 was evaluated in hepatocellular carcinoma (HCC), a common cancer worldwide (it was found that human ZG16 was significantly down-regulated in HCC). ZG16 protein took part also in several secretions of glycoproteins (the secretion of human ZG16 would be affected when the synthesis of glycans was inhibited with inhibitor or without glucose in cell culture).

Research topic

Oncology, Others

Amino Acid Sequence

MKHHHHHHS NAIQARSSSY SGEYGS GGK RFSHSGNQLD GPITALRVRV NTYYIVGLQV RYKQVWSDYV GGRNGDLEEI
FLHPGESVIQ VSGKYKWYLK KLVFVTDKGR YLSFGKDSGT SFNAVPLHPN TVLRFISGRS GSLIDAIGLH WDVYPTSCSR C

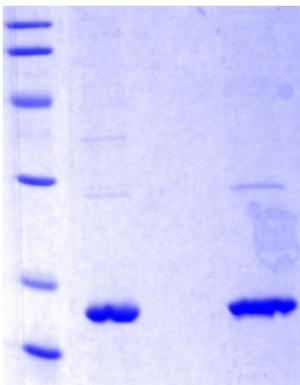
Source

E. coli

Purity

Purity as determined by densitometric image analysis: >95%

SDS-PAGE gel



14% SDS-PAGE separation of Human ZG16

1. M.W. marker - 97, 66, 45, 31, 21, 14 kDa

2. reduced and boiled sample, 5µg/lane

3. non-reduced and non-boiled sample, 5µg/lane

Endotoxin

<1.0 EU/ug

Formulation

Filtered (0,4 µm) and lyophilized in 0.5 mg/mL in 0.05 M phosphate buffer, 0.075 M NaCl, pH 7.4

Reconstitution

Add deionized water to prepare a working stock solution of approximately 0.5 mg/mL and let the lyophilized pellet dissolve completely. Filter sterilize your culture media/working solutions containing this non-sterile product before using in cell culture.

Shipping

At ambient temperature. Upon receipt, store the product at the temperature recommended below.

Storage, Stability/Shelf Life

Store lyophilized protein at -80°C. Lyophilized protein remains stable until the expiry date when stored at -80°C. Aliquot reconstituted protein to avoid repeated freezing/thawing cycles and store at -80°C for long term storage. Reconstituted protein can be stored at 4°C for a week.

Quality Control Test

BCA to determine quantity of the protein.

SDS PAGE to determine purity of the protein.

LAL to determine quantity of endotoxin.

Applications

ELISA, Western blotting

HEADQUARTERS: BioVendor Laboratorní medicína, a.s.	Karasek 1767/1	621 00 Brno CZECH REPUBLIC	Phone: +420-549-124-185 Fax: +420-549-211-460	E-mail: info@biovendor.com sales@biovendor.com Web: www.biovendor.com
AUSTRIA: BioVendor GesmbH	Nußdorfer Straße 20/10	1090 Vienna AUSTRIA	Phone: +43-1-89090-25 Fax: +43-1-89090-2515	E-mail: infoAustria@biovendor.com
GERMANY, SWITZERLAND: BioVendor GmbH	Otto-Hahn-Straße 16	34123 Kassel GERMANY	Phone: +49-6221-433-9100 Fax: +49-6221-433-9111	E-mail: infoEU@biovendor.com
USA, CANADA AND MEXICO: BioVendor LLC	128 Bingham Rd. Suite 1300	Asheville, NC 28806 USA	Phone: +1-828-575-9250 +1-800-404-7807 Fax: +1-828-575-9251	E-mail: infoUSA@biovendor.com