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). 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 particularly in the carbohydrate recognition domain to the plant lectin jacalin, which recognizes terminal galactose attached to N-acetylgalactosamine by a β1−3 linkage. ZG16 is considered a secretory lectin ZG16 due to its sequence homology with this lectin,. Sequence analyses uncovered that ZG16 is highly conserved amongst mammals but also appears in many other species. Rat ZG16 is highly expressed in pancreas, colon, and duodenum, where the protein was localized in the zymogen granule of pancreas. Rat ZG16 tokes 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 and colon. Moreover, ZG16 is also weakly expressed in pedunculus cerebellaris, but not in other regions of the brain. Taking into account, the specific expression pattern in the human liver, ZG16 was evaluated in hepatocellular carcinoma (HCC), which is a common cancer worldwide. It was found that human ZG16 was significantly down-regulated in HCC. ZG16 protein also took part in several secretions of glycoproteins. For instance, the secretion of human ZG16 would be affected when the synthesis of glycans was hindered with an inhibitor or when there is a lack of glucose in the cell culture.

Research topic

Oncology, Others

Amino Acid Sequence

MKHHHHHHAS NAIQARSSSY SGEYGSGGGK RFSHSGNQLD GPITALRVRV NTYYIVGLQV RYGKVWSDYV GGRNGDLEEI FLHPGESVIQ VSGKYKWYLK KLVFVTDKGR YLSFGKDSGT SFNAVPLHPN TVLRFISGRS GSLIDAIGLH WDVYPTSCSR C

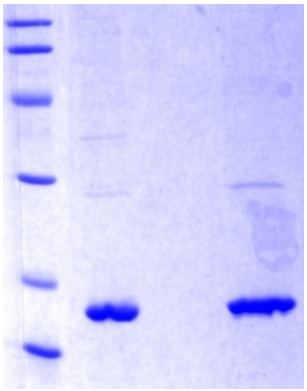
Source

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. Product is not sterile! Please filter the product by an appropriate sterile filter before using it in the 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

Gentaur Molecular Products
Voortstraat 49
1910 Kampenhout, Belgium
http://www.gentaur-worldwide.com