9051 Mira Mesa Blvd, #910094
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AZGP1 Human

Alpha-2-Glycoprotein 1 Zinc-Binding Human
RCP0151

Product Overview

Name	AZGP1 Human
Description	
Alpha-2-Glycoprotein 1 Zinc-Binding Human	
Accession (Primary)	P25311
Synonyms	
Zn-alpha-2-glycoprotein, Zn-alpha-2-GP, AZGP1, ZAG, Zinc-alpha-2-glycoprotein, ZNGP1, ZA2G.	
Introduction	

Zinc-alpha-2-glycoprotein (ZAG) is found in body fluids such as serum, sweat, and seminal and breast cyst fluids. It is identical in amino acid sequence to tumor-derived lipid mobilizing factor (LMF), a protein associated with the dramatic loss of adipose body stores in cancer cachexia, and has been shown to stimulate lipolysis by adipocytes in vivo and in vitro. A role for ZAG has been proposed in the regulation of body weight, and age-dependent changes in genetically influenced obesity, and also it regulates melanin production by normal and malignant melanocytes. It has also recently been classified as a novel adipokine in that it is produced by both white and brown fat adipocytes and may act in a local autocrine fashion in the reduction of adiposity in cachexia. Controlling ZAG/LMF's activity could be life-saving in the management of certain cancers and other cachexiainducing conditions, and its possible normal role in body fat store homeostasis is deserving of understanding in its own right. ZAG exhibits a class I major histocompatibility complex (MHC) fold but is a soluble protein rather than being anchored to plasma membranes and does not associate with alpha-2-microglobulin in humans. Like antigen-presenting MHC class I proteins, ZAG has an open apical groove, and X-ray crystallography of human derived ZAG revealed an unidentifiable electron density in a similar position to that occupied by antigenic peptides in classical MHC proteins and glycolipids in isoforms of CD1. This presumptive ligand is not a peptide, and the groove is too small to hold a glycolipid such as is presented by CD1 isoforms. By analogy with all other MHC class I-related proteins that have an open apical groove [some do not], occupancy by a ligand is probably crucial to ZAG's biological function. Despite all of the structural and biochemical evidence that ZAG binds a ligand, none has so far been found by extraction from protein isolated from biological fluids. This difficulty could be because the ligand is labile, heterogeneous, or readily lost during purification procedures. Knowing more about how ZAG interacts with the compounds it has been found to bind, both natural and artificial, will inform searches for the elusive ligand(s) and its/their role in ZAG's signaling function.

Source

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Human Serum.

Physical Appearance

Filtered White lyophilized (freeze-dried) powder.

Formulation

ZA2G protein filtered (0.4 µm) and lyophilized in 0.5mg/ml in 20mM TRIS and 50mM NaCl, pH 8.0.

Stability

Store lyophilized protein at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after two weeks at 4°C.

Purity

Greater than 80% as determined by SDS-PAGE.

Amino acid sequence

QENQDGRYSL TYIYTGLSKH VEDVPAFQAL GSLNDLQFFR YNSKDRKSQP MGLWRQVEGM EDWKQDSQLQ KAREDIFMET LKDIVEYYND SNGSHVLQGR FGCEIENNRS SGAFWKYYYD GKDYIEFNKE IPAWVPFDPA AQITKQKWEA EPVYVQRAKA YLEEECPATL RKYLKYSKNI LDRQDPPSVV VTSHQAPGEK KKLKCLAYDF YPGKIDVHWT RAGEVQEPEL RGDVLHNGNG TYQSWVVVAV PPQDTAPYSC HVQHSSLAQP LVVPWEAS.

Solubility

It is recommended to 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.

Human Virus Test

Blood samples from each donor have been tested and found negative for HBsAg, anti-HCV, HIV Ag/Ab and syphilis.

Precautions

AZGP1 Human is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (P25311)