

Recombinant Human Alpha-2-glycoprotein 1, Zinc-binding

Cat. No. AZGP1-238H **Lot. No.** (See product label)

SPECIFICATION

Product Overview Recombinant Human ZA2G produced in HEK cells is a single, glycosylated polypeptide chain. The protein contains a total of 290 amino acids. Recombinant Human ZA2G is identical to Swiss-Prot-P25311 (AA 18-295, mature Zinc-Alpha-2-Glycoprotein). Twelve extra amino acids were fused with the N-terminus (bold).

Species Human

Source HEK293

Description 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. 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.

Sequences Of Amino Acids **ASWSHPQFEK GSQENQDGRY SLTYIYTGLS KHVEDVPAFQ ALGSLNDLQF**
FRYNSKDRKS QPMGLWRQVEGMEDWKQDSQ LQKAREDIFM ETLKDIVEYY
NDSNGSHVLQ GRFGCEIENN RSSGAFWKYY YDGKDYIEFNKEIPAWVPFD
PAAQITKQKW EAEPVYVQRA KAYLEEECPA TLRKYLKYSK NILDRQDPPS
VVVTSHQAPG EKKKLKCLAYDFYPGKIDVH WTRAGEVQEP ELRGDVLHNG
NGTYQSWVVV AVPPQDTAPY SCHVQHSSLA QPLVVPWEAS.

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Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	Filtered (0.4 μ m) and lyophilized in 0.5 mg/ml in 0.1M Tris-HCl pH 8.0 and 150mM NaCl.
Reconstitution	Add deionized water to a working concentration approximately 0.5 mg/ml and let the lyophilized pellet dissolve completely.
Purity	Greater than 90.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Biological Activity	Differentiated human SGBS adipocytes were incubated for 18 h at two dose levels of rhZA2G - 5 and 20 μ g/ml. Lipolysis was quantified by measuring glycerol release into the medium using a standard protocol. Isoproterenol (10 μ M) and IBMX (100 μ M) were used as positive controls. "Con" stands for the negative control. There was a 3-fold increase in glycerol release with both doses. The increase was statistically significant at 5 μ g/ml dose of rhZA2G ($p < 0.01$) as well as in positive controls.
Stability	Upon reconstitution ZA2G should be stored at 4°C between 2-7 days and for future use below -18°C. Please avoid freeze-thaw cycles.
GENE INFORMATION	
Gene Name	AZGP1 alpha-2-glycoprotein 1, zinc-binding [Homo sapiens]
Synonyms	AZGP1; alpha-2-glycoprotein 1, zinc-binding; ZAG; ZA2G; alpha-2-glycoprotein 1, zinc; Zn-alpha2-glycoprotein; Alpha-2-glycoprotein, zinc; Zn-alpha-2-GP; NP_001176
Gene ID	563
mRNA Refseq	NM_001185

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Protein Refseq	NP_001176
MIM	194460
UniProt ID	P25311
Chromosome Location	7q22.1
Function	fatty acid binding; protein transmembrane transporter activity; ribonuclease activity
PDB rendering based on 1t7v.	