SANTA CRUZ BIOTECHNOLOGY, INC.

ZAG (6G2): sc-21721

BACKGROUND

ZAG (Zn-α2-glycoprotein, also designated Zn-α2-gp) is a soluble, secreted protein found in serum and other body fluids (such as cerebrospinal fluid, blood plasma, urine and sweat). ZAG has a tendency to precipitate with zinc salts, has electrophoretic mobility in the region of the two globulins, and has 18% carbohydrate content. A member of the immunoglobulin superfamily, ZAG has a high degree of sequence similarity to class-I major histocompatibility complex (MHC) antigens. The ZAG structure includes a large groove analogous to class I MHC peptide binding grooves. The crystal structure of ZAG resembles a class I MHC heavy chain but does not bind the class I light chain β-2-Microglobulin, unlike other MHC related proteins. ZAG stimulates lipid degradation in adipocytes and its overexpression causes the extensive fat losses associated with some advanced cancers.

REFERENCES

1. Jirka, M., et al. 1973. Zn-α2-glycoprotein in sweat. Cas. Lek. Cesk. 112: 1606-1608.
2. Ekman, R., et al. 1976. Renal handling of Zn-α2-glycoprotein as compared with that of albumin and the retinol-binding protein. J. Clin. Invest. 57: 945-954.
3. Shibata, S., et al. 1982. Nephritogenic glycoprotein. IX. Plasma Zn-α2-glycoprotein as a second source of nephritogenic glycoprotein in urine. Nephron 31: 170-176.
4. Uria, J.A., et al. 1996. Alternative splicing gives rise to two novel long isoforms of Zn-α2-glycoprotein, a member of the immunoglobulin superfamily. Gene 169: 233-236.
5. Sanchez, L.M., et al. 1997. Biochemical characterization and crystalization of human Zn-α2-glycoprotein, a soluble class I major histocompatibility complex homolog. Proc. Natl. Acad. Sci. USA 94: 4626-4630.
6. Davidsson, P., et al. 1999. Peptide mapping of proteins in cerebrospinal fluid utilizing a rapid preparative two-dimensional electrophoretic procedure and matrix-assisted laser desorption/ionization mass spectrometry. Biochim. Biophys. Acta 1473: 391-399.

CHROMOSOMAL LOCATION

Genetic locus: AZGP1 (human) mapping to 7q22.1; Azgp1 (mouse) mapping to 5 G2.

SOURCE

ZAG (6G2) is a mouse monoclonal antibody raised against purified Zn-α2-glycoprotein (ZAG) of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

ZAG (6G2) is recommended for detection of ZAG of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for ZAG siRNA (h): sc-36865, ZAG siRNA (m): sc-36866, ZAG shRNA Plasmid (h): sc-36865-SH, ZAG shRNA Plasmid (m): sc-36866-SH, ZAG shRNA (h) Lentiviral Particles: sc-36865-V and ZAG shRNA (m) Lentiviral Particles: sc-36866-V.

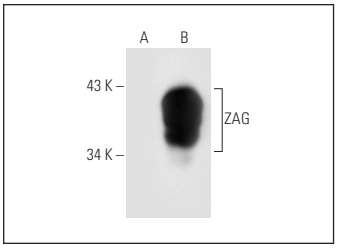
Molecular Weight of ZAG: 47 kDa.

Positive Controls: ZAG (h): 293T Lysate: sc-114991, mouse spleen extract: sc-2391 or human spleen extract: sc-363779.

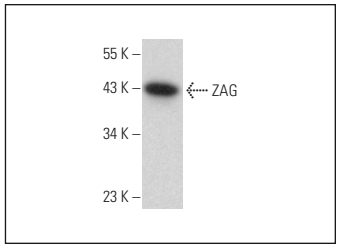
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ZAG (6G2): sc-21721. Western blot analysis of ZAG expression in non-transfected: sc-117752 (**A**) and human ZAG transfected: sc-114991 (**B**) 293T whole cell lysates.



ZAG (6G2): sc-21721. Western blot analysis of ZAG expression in human spleen tissue extract.

SELECT PRODUCT CITATIONS

1. Guo, J., et al. 2015. Lipopolysaccharide challenge significantly influences lipid metabolism and proteome of white adipose tissue in growing pigs. Lipids Health Dis. 14: 68.
2. Yin, C., et al. 2017. Identification of potential serum biomarkers in pigs at early stage after Lipopolysaccharide injection. Res. Vet. Sci. 111: 140-146.

RESEARCH USE

For research use only, not for use in diagnostic procedures.