SANTA CRUZ BIOTECHNOLOGY, INC.

ZAG (E-20): sc-11243

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: Azgp1 (mouse) mapping to 5 G2.

SOURCE

ZAG (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ZAG of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-11243 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ZAG (E-20) is recommended for detection of ZAG of mouse 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

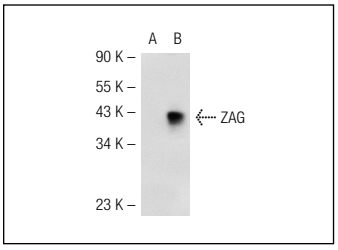
Molecular Weight of ZAG: 47 kDa.

Positive Controls: ZAG (m): 293T Lysate: sc-124693 or mouse spleen extract: sc-2391.

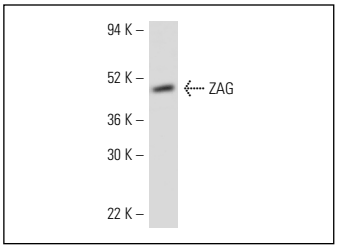
STORAGE

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

DATA



ZAG (E-20): sc-11243. Western blot analysis of ZAG expression in non-transfected: sc-117752 (**A**) and mouse ZAG transfected: sc-124693 (**B**) 293T whole cell lysates.



ZAG (E-20): sc-11243. Western blot analysis of ZAG expression in mouse spleen tissue extract.

SELECT PRODUCT CITATIONS

1. Bing, C., et al. 2004. Zinc-α2-glycoprotein, a lipid mobilizing factor, is expressed in adipocytes and is up-regulated in mice with cancer cachexia. Proc. Natl. Acad. Sci. USA 101: 2500-2505.
2. Rolli, V., et al. 2007. Lipolysis is altered in MHC class I zinc-α2-glycoprotein deficient mice. FEBS Lett. 581: 394-400.
3. Cannon, T., et al. 2007. Comparison of animal models for head and neck cancer cachexia. Laryngoscope 117: 2152-2158.
4. Schmitt, R., et al. 2008. Zag expression during aging suppresses proliferation after kidney injury. J. Am. Soc. Nephrol. 19: 2375-2383.
5. Mracek, T., et al. 2010. The adipokine zinc-α2-glycoprotein (ZAG) is downregulated with fat mass expansion in obesity. Clin. Endocrinol. 72: 334-341.
6. Mracek, T., et al. 2010. Downregulation of zinc-α2-glycoprotein in adipose tissue and liver of obese ob/ob mice and by tumour necrosis factor-α in adipocytes. J. Endocrinol. 204: 165-172.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.