

# ZAG (F-6): sc-271957

## BACKGROUND

ZAG (Zn- $\alpha$ 2-glycoprotein, also designated Zn- $\alpha$ 2-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 MHC class I peptide binding grooves. The crystal structure of ZAG resembles a MHC class I heavy chain but does not bind the class I light chain  $\beta$ -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

- Jirka, M. and Blanicky, P. 1973. Zn- $\alpha$ 2-glycoprotein in sweat. *Cas. Lek. Cesk.* 112: 1606-1608.
- Ekman, R., et al. 1976. Renal handling of Zn- $\alpha$ 2-glycoprotein as compared with that of albumin and the retinol-binding protein. *J. Clin. Invest.* 57: 945-954.
- Shibata, S. and Miura, K. 1982. Nephritogenic glycoprotein. IX. Plasma Zn- $\alpha$ 2-glycoprotein as a second source of nephritogenic glycoprotein in urine. *Nephron* 31: 170-176.
- Uria, J.A., et al. 1996. Alternative splicing gives rise to two novel long isoforms of Zn- $\alpha$ 2-glycoprotein, a member of the immunoglobulin superfamily. *Gene* 169: 233-236.

## CHROMOSOMAL LOCATION

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

## SOURCE

ZAG (F-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 257-279 near the C-terminus of ZAG of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ZAG (F-6) is available conjugated to agarose (sc-271957 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271957 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271957 PE), fluorescein (sc-271957 FITC), Alexa Fluor<sup>®</sup> 488 (sc-271957 AF488), Alexa Fluor<sup>®</sup> 546 (sc-271957 AF546), Alexa Fluor<sup>®</sup> 594 (sc-271957 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-271957 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-271957 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-271957 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271957 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

ZAG (F-6) is recommended for detection of ZAG of mouse origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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.

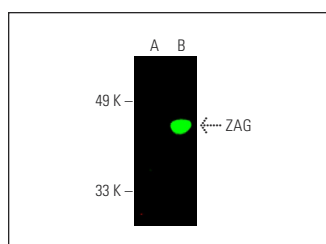
Molecular Weight of ZAG: 47 kDa.

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

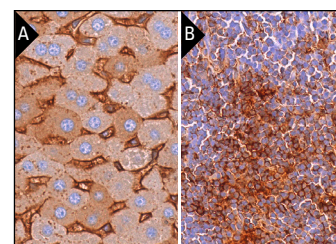
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\lambda$  BP-HRP: sc-516132 or m-IgG $\lambda$  BP-HRP (Cruz Marker): sc-516132-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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-IgG $\lambda$  BP-FITC: sc-516185 or m-IgG $\lambda$  BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\lambda$  BP-HRP: sc-516132 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



ZAG (F-6): sc-271957. Near-infrared western blot analysis of ZAG expression in non-transfected: sc-117752 (A) and mouse ZAG transfected: sc-124693 (B) 293T whole cell lysates. Blocked with UltraCruz<sup>®</sup> Blocking Reagent: sc-516214. Detection reagent used: m-IgG $\lambda$  BP-CFL 680: sc-516194.



ZAG (F-6): sc-271957. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse liver tissue showing cytoplasmic staining of hepatocytes and cytoplasmic and membrane of hepatic sinusoidal cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse lymph node tissue showing cytoplasmic and membrane staining of cells in germinal center and cells in non-germinal center (B).

## STORAGE

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

## RESEARCH USE

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