

# fetuin-A (H-8): sc-166531

## BACKGROUND

Fetuin (also designated  $\alpha$ -2- $\zeta$ -globulin or  $\alpha$ -2-HS-glycoprotein) is a secreted plasma protein that is expressed in hepatocytes, monocyte/macrophages and in bone and is downregulated during injury and inflammation. Fetuin preferentially binds to and carries calcium and barium ions in the blood, where it is thought to mediate serum calcium homeostasis and mineralization, and to potentially participate in the transport of bioactive molecules. Additionally, fetuin has been shown to function as an acute phase antiinflammatory mediator that is critical to regulating the innate immune response following tissue injury. During inflammation, circulating fetuin levels substantially decrease as fetuin becomes associated with the membranes of macrophages. This membrane associated form of fetuin acts as an opsonic participant by potentiating the entry of cationic small molecules into the activated macrophage, which in turn facilitates macrophage-deactivating mechanisms. Biologically active fetuin is derived from a precursor protein that is cleaved at the amino-terminus to generate two chains held together by a single disulfide bond.

## REFERENCES

1. Lebreton, J.P., et al. 1979. Serum concentration of human  $\alpha$ -2-HS glycoprotein during the inflammatory process: evidence that  $\alpha$ -2-HS glycoprotein is a negative acute-phase reactant. *J. Clin. Invest.* 64: 1118-1129.
2. Lee, C.C., et al. 1987. Human  $\alpha$ -2-HS-glycoprotein: the A and B chains with a connecting sequence are encoded by a single mRNA transcript. *Proc. Natl. Acad. Sci. USA* 84: 4403-4407.
3. Schinke, T., et al. 1996. The serum protein  $\alpha$ -2-HS glycoprotein/fetuin inhibits apatite formation *in vitro* and in mineralizing calvaria cells. A possible role in mineralization and calcium homeostasis. *J. Biol. Chem.* 271: 20789-20796.

## CHROMOSOMAL LOCATION

Genetic locus: AHSG (human) mapping to 3q27.3; Ahsg (mouse) mapping to 16 B1.

## SOURCE

fetuin-A (H-8) is a mouse monoclonal antibody raised against amino acids 68-367 of fetuin-A of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

fetuin-A (H-8) is available conjugated to agarose (sc-166531 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166531 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166531 PE), fluorescein (sc-166531 FITC), Alexa Fluor® 488 (sc-166531 AF488), Alexa Fluor® 546 (sc-166531 AF546), Alexa Fluor® 594 (sc-166531 AF594) or Alexa Fluor® 647 (sc-166531 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166531 AF680) or Alexa Fluor® 790 (sc-166531 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

## APPLICATIONS

fetuin-A (H-8) is recommended for detection of fetuin-A of mouse, rat and human 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for fetuin-A siRNA (h): sc-39442, fetuin-A siRNA (m): sc-39443, fetuin-A shRNA Plasmid (h): sc-39442-SH, fetuin-A shRNA Plasmid (m): sc-39443-SH, fetuin-A shRNA (h) Lentiviral Particles: sc-39442-V and fetuin-A shRNA (m) Lentiviral Particles: sc-39443-V.

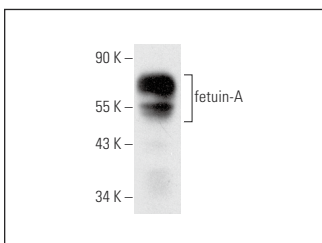
Molecular Weight of fetuin-A: 59 kDa.

Positive Controls: rat liver extract: sc-2395, Hep G2 cell lysate: sc-2227 or mouse liver extract: sc-2256.

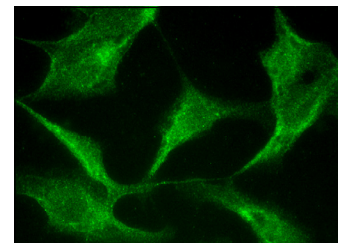
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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



fetuin-A (H-8): sc-166531. Western blot analysis of fetuin-A expression in Hep G2 whole cell lysate.



fetuin-A (H-8): sc-166531. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic localization.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.