SANTA CRUZ BIOTECHNOLOGY, INC.

fetuin-A (F-20): sc-9666

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Fetuin (also designated α-2-ζ-globulin or α-2-HS-glycoprotein) is a secreted plasma protein that is expressed in hepatocytes, monocyte/macrophages and in bone and is down-regulated 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 anti-inflammatory 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 α 2 HS glycoprotein during the inflammatory process: evidence that α 2 HS glycoprotein is a negative acute-phase reactant. J. Clin. Invest. 64: 1118-1129.
2. Lee, C.C., et al. 1987. Human α 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 α2-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 (F-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of fetuin-A 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-9666 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

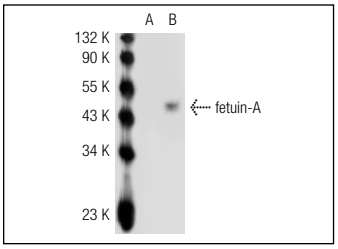
fetuin-A (F-20) is recommended for detection of fetuin-A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution 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.

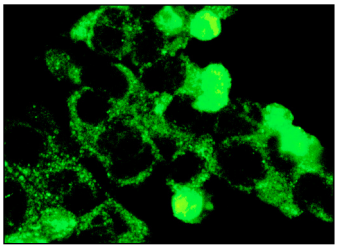
Molecular Weight of fetuin-A: 59 kDa.

Positive Controls: fetuin-A (m2): 293T Lysate: sc-120238, mouse liver extract: sc-2256 or Hep G2 cell lysate: sc-2227.

DATA



fetuin-A (F-20): sc-9666. Western blot analysis of fetuin-A expression in non-transfected: sc-117752 (**A**) and mouse fetuin-A transfected: sc-120238 (**B**) 293T whole cell lysates.



fetuin-A (F-20): sc-9666. Immunofluorescence staining of methanol-fixed Hep G2 cells showing cytoplasmic and extracellular localization.

SELECT PRODUCT CITATIONS

1. Nagayama, S., et al. 2007. Fetuin mediates hepatic uptake of negatively charged nanoparticles via scavenger receptor. Int. J. Pharm. 329: 192-198.
2. Santos-González, M., et al. 2012. Dietary oil modifies the plasma proteome during aging in the rat. Age 34: 341-358.

PROTOCOLS

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