

fetuin-B (N-17): sc-32533



The Power to Question

BACKGROUND

Fetuin 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 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. Fetuin-B is primarily expressed in liver and testes.

REFERENCES

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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 α 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.
4. Osawa, M., et al. 1997. Structure of the gene encoding human α 2-HS glycoprotein (AHS2). *Gene* 196: 121-125.
5. Dziegielewska, K.M., et al. 1998. Modification of macrophage response to lipopolysaccharide by fetuin. *Immunol. Lett.* 60: 31-35.
6. Wang, H., et al. 1998. Fetuin (α 2-HS glycoprotein) opsonizes cationic macrophage deactivating molecules. *Proc. Natl. Acad. Sci. USA* 95: 14429-14434.
7. Banine, F., et al. 1998. Structural and functional analysis of the 5'-transcription control region for the human α 2-HS glycoprotein gene. *Biochim. Biophys. Acta* 1398: 1-8.

CHROMOSOMAL LOCATION

Genetic locus: FETUB (human) mapping to 3q27.3.

SOURCE

fetuin-B (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of fetuin-B of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-32533 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

fetuin-B (N-17) is recommended for detection of fetuin-B of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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-B siRNA (h): sc-45303, fetuin-B shRNA Plasmid (h): sc-45303-SH and fetuin-B shRNA (h) Lentiviral Particles: sc-45303-V.

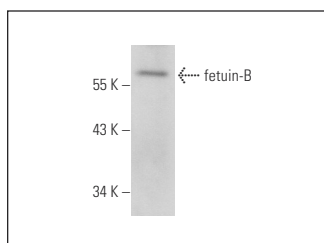
Molecular Weight of fetuin-B: 60 kDa.

Positive Controls: human brain tissue extract.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



fetuin-B (N-17): sc-32533. Western blot analysis of fetuin-B expression in human brain tissue extract.

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.