

fetuin-B (LL9): sc-73978

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 a secreted protein primarily expressed in liver and testis.

REFERENCES

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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.
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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 ($\alpha 2$ -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 $\alpha 2$ -HS glycoprotein gene. *Biochim. Biophys. Acta* 1398: 1-8.
8. Olivier, E., et al. 2000. Fetuin-B, a second member of the fetuin family in mammals. *Biochem. J.* 350: 589-597.

CHROMOSOMAL LOCATION

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

SOURCE

fetuin-B (LL9) is a mouse monoclonal antibody raised against full length recombinant fetuin-B of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml PBS with < 0.1% sodium azide and protein stabilizer.

APPLICATIONS

fetuin-B (LL9) is recommended for detection of fetuin-B of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) 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.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

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

PROTOCOLS

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