Genemed Synthesis, Inc.
6203 Wood Lake Center Dr., Bldg. 2, San Antonio, TX 78244, USA
Toll free (800) 344-5337; **Phone**: (210) 745-5988; **Fax** (210) 745-5992
Email: info@genemedsyn.com, **Website**: www.genemedsyn.com

Product Specification Sheet

Bovine Fetuin (Fetuin A, AHSG, Alpha 2-HS) IgG-Agarose

Cat. # FETB11-S	Rabbit Anti- bovine fetuin protein antiserum	**SIZE**: 100 ul
Cat. # FETB11-C	Bovine fetuin protein control for Western blot	**SIZE**: 100 ul
Cat. # FETB11-AS	Rabbit Anti-bovine fetuin protein IgG-agarose (aff matrix)	**SIZE**: 0.5 ml

The product of the AHSG gene is commonly referred to as fetuin in species other than the human. Fetuin was subsequently shown to be a very abundant plasma protein in fetal cattle, sheep, pig, and goat, and also to be present in humans and rodents. Fetuins are proteins, which are made in the liver and secreted into the blood. They belong to a large group of binding proteins mediating the transport and availability of a wide variety of substances (drugs, hormones, fatty acids, vitamins etc) in the blood. Fetuin is more abundant in fetal blood, hence the name fetuin (from lat. fetus). Fetal calf serum contains more fetuin than albumin, while adult serum contains more albumin than fetuin.

Human fetuin is synonymous with α2-HS-Glycoprotein (genetic symbol AHSG), α2-HS, A2HS, AHS, HSGA and fetuin-A. Fetuin-A exists as a single copy gene in the human and mouse genomes. A closely related gene, fetuin-B also exists in the human, rat and mouse genomes. Like fetuin-A fetuin-B is made predominantly by the liver and to a lesser extent by a number of secretory tissues. Fetuins exist it in all vertebrate genomes including fish and reptiles. Thus fetuins belong to the cystatin superfamily of proteins. Fetuin relatives within this superfamiliy are the histidine-rich glycoprotein (HRG) and kininogen (KNG). Fetuin-A deficiency dramatically increased the calcification proneness of these mice in that all mice sponteneously calcified throughout their body even without mineral-rich diet or surgical tissue trauma. Therefore Fetuin A is regarded as a potent inhibitor of systemic calcification. Fetuins have been implicated in several diverse functions, including osteogenesis and bone resorption, regulation of the insulin and hepatocyte growth factor receptors, and response to systemic inflammation.

Fetuin is a mixture of proteins containing a wider range of growth factors and attachments factors normally found in fetal calf serum. Themajor protein in fetuin is ~48.5 Kda (74% protein; glycosylated). The other minor components of fetuins are alpha-1 and alpha-2 globulins and variety of growth factors such as IGF-1/2 and FGFs. Fetuins, along with Transferrin, selenium and insulin, have been used in serum-free defined media formulations to increase cell attachment and growth. Fetuin is also an effective serine protease and it may improve cellular viability by inhibiting several proteases.

Animal source

Due to the concerns of BSE, there is increasing demand of animal derived proteins from countries that are free from BSE and Scrapie. The US recognizes Australia and New Zealand as the counties free from BSE and Scrapie. Australia is also free of List A diseases as defined by the World Organization for Animal Health (OIE). Fetuin supplied by GSI is produced from selected animals in **Australia** that have passed USDA inspection and free from diseases.

Source of Antigen and Antibodies

Antigen	Highly purified antigenic grade (BSE-free) fetuin protein
Ab Host/type	Rabbit polyclonal antiserum #FETB11-S
2ab	Goat Anti-rabbit IgG-HRP cat # SA-20320 (AP, biotin, FITC conjugates also available)
-ve control	# SA-20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)
100ul solution lyophilized powder
Supplied in Buffer: 0.05% azide
Reconstitute powder in 100 ul PBS
Stability: Store powder at -20oC for 2-3 years.

#FETB11-AS (rabbit anti-FETB IgG-Agarose)
IgG was purified from the whole antiserum #FETB11-S and coupled to Agarose using proprietary methods. The affinity matrix is supplied as 50% (v/v) suspension of affinity beads:PBS+azide. It should be stored at 4oC.
The product can be used for immunoprecipitation of FTEB protein or as small affinity column to remove anti-FETB IgG from samples.

Recommended Usage

Western Blotting 1:1K-5K for antiserum using Chemiluminescence technique).
ELISA (1:10K-1:100K; using 50-100 ng of control peptide/well).
Histochemistry & Immunofluorescence: no tested**.** We recommend the use of 1:50 using formalin-fixed paraffin embedded tissues or 4% paraformaldehyde fixed frozen sections.

Specificity & Cross-reactivity

The antibodies react with bovine fetuin. No significant reactivity is observed with human fetuin. Antibody crossreactivity in various species is not established. Antibodies to human (Cat# FETA13-M; FETA15-A) and mouse fetuin (#FETA14-M) as well as purified human, mouse, and bovine fetuin are available for control studies.

*This product is for In vitro research use only.

Related material available from GSI

Purified bovine, mouse, human, and Bovine fetuins A and B
Antibodies to mouse, human, and bovine fetuins
ELISA kit for bovine fetuin and human fetuin
Bovine albumin and AFP antibodies and ELISA kits