

Product Specification Sheet

**Human Fetuin (Fetuin A, AHSG, Alpha 2-HS) antibodies and controls**

<input type="checkbox"/> Cat. # FETA13-M	Mouse Monoclonal Anti-Human Fetuin A protein IgG	<b>SIZE:</b> 100 ul
<input type="checkbox"/> Cat. # FETA13-C	Recombinant Human Fetuin A protein control for Western blot	<b>SIZE:</b> 100 ul

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  $\alpha$ 2-HS-Glycoprotein (genetic symbol AHSG),  $\alpha$ 2-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 in all vertebrate genomes including fish and reptiles. Thus fetuins belong to the cystatin superfamily of proteins. Fetuin relatives within this superfamily are the histidine-rich glycoprotein (HRG) and kininogen (KNG). Fetuin-A deficiency dramatically increased the calcification proneness of these mice in that all mice spontaneously 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.

**Source of Antigen and Antibodies**

<b>Antigen</b>	Recombinant purified human Fetuin A
<b>Ab Host/type</b>	Mouse monoclonal IgG1 # FETA13-M
<b>2-Ab</b>	<b>Goat Anti-mouse IgG-HRP conjugate</b> Cat # 40320 (AP, biotin, FITC conjugates also available)
<b>-ve control IgG</b>	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

**Isotype Specific Controls**

<b>Catalog#</b>	<b>ProdDescription</b>
20102-101	Mouse IgG1 isotype control, purified
20102-101-1	Mouse IgG1 isotype control, purified
20102-101-APC	Mouse IgG1-APC conjugate (isotype control)

20102-101-B	Mouse IgG1-Biotin conjugate (isotype control)
20102-101-F	Mouse IgG1-FITC conjugate (isotype control)
20102-101-PP	Mouse IgG1-FITC-PE conjugate (isotype control)
20102-101-HP	Mouse IgG1-HRP conjugate (isotype control)
20102-101-PC5	Mouse IgG1-PE-Cy5 conjugate (isotype control)
20102-101-PE	Mouse IgG1-PE conjugate (isotype control)

**# FET13-C, Recombinant Fetuin A protein**

Recombinant Human fetuin A (NS) expressed as hi-stag ~60 kda purified. For Western blot +ve control (Cat # FETA13-C) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of FETA13-C for good visibility with antibody Cat # FETB13-M. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the FETA13-C solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly.

**Form & Storage of Antibodies/Peptide Control**

**Antibody purified)**

- 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.

**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 human fetuin. Antibody crossreactivity in various species is not established. Antibodies to human (Cat# .

References: Lee CC (1987) PNAS 84, 4403; Schafer C (2003) J. Clin. Invest. 112, 357; Wang H (1998) PNAS 95, 14429  
\*This product is for In vitro research use only.

**Related material available from ADI**

Purified bovine, mouse, human, and Bovine fetuins A and B

Antibodies to mouse, human, and bovine fetuins

ELISA kit for bovine fetuin

FETA13-M      120925A

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