## Recombinant Human Fetuin-A/AHSG Protein (His Tag)

Catalog Number:PKSH031690



Note: Centrifuge before opening to ensure complete recovery of vial contents.

## **Description**

Synonyms Alpha-2-HS-Glycoprotein;Alpha-2-Z-Globulin;Ba-Alpha-2-Glycoprotein;Fetuin-

A;AHSG;FETUA

Species Human

Expression Host

Sequence

Met 1-Val 367

Accession

NP\_001613.2

Calculated Molecular Weight

Observed molecular weight

Tag

HEK293 Cells

Met 1-Val 367

NP\_001613.2

Calculated Molecular Weight

55-60 kDa

C-His

Bioactivity 1. Immobilized human FCN1 at 10 μg/ml can bind biotinylated recombinant human

Fetuin-A with a linear range of 16-2000 ng/ml.

2. Measured by its ability to inhibit active Cathepsin V cleavage of a fluorogenic peptide substrate Z-LR-AMC, R&D Systems, Catalog # ES008. The IC50 value is <

100 nM.

## **Properties**

**Purity** > 97 % as determined by reducing SDS-PAGE.

**Endotoxin** < 1.0 EU per µg of the protein as determined by the LAL method.

**Storage** Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to

-80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots

of reconstituted samples are stable at < -20°C for 3 months.

**Shipping** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation** Lyophilized from sterile PBS, pH 7.2

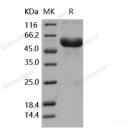
Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as

protectants before lyophilization.

Please refer to the specific buffer information in the printed manual.

**Reconstitution** Please refer to the printed manual for detailed information.

#### Data



> 97 % as determined by reducing SDS-PAGE.

## **Background**

Fetuin-A, also known as Alpha-2-HS-Glycoprotein (AHSG), belongs to the Fetuin family, is a plasma binding protein, and is more abundant in fetal than adult blood. It is involved in several functions, such as endocytosis, brain development

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and the formation of bone tissue. Fetuins are carrier proteins like albumin. Fetuin-A forms soluble complexes with calcium and phosphate and thus is a carrier of otherwise insoluble calcium phosphate. Thus Fetuin-A is a potent inhibitor of pathological calcification. The circulating levels of fetuin-A, a well-described inhibitor of calcification, regulate the cell-dependent process of osteogenesis. The low circulating fetuin-A levels are associated with a greater prevalence and/or severity of Vascular calcification (VC) and increased risk for all-cause and cardiovascular mortality. However, high circulating fetuin-A levels appear to induce insulin resistance and, in non-dialyzed subjects with diabetic nephropathy, are directly related to VC burden. The emerging role of fetuin-A deficiency as a risk factor in dialysis patients was documented in cross-sectional studies demonstrating a significant correlation with all-cause and cardiovascular mortality. Additionally, Human fetuin-A is a negative acute phase protein involved in inflammatory diseases, thus being a potential physiological regulator of meprin activity. Fetuin-A is a broad-range protease inhibitor. Fetuin-A and cystatin C as endogenous proteolytic regulators of meprin activity broadens our understanding of the proteolytic network in plasma.

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