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## Product Data Sheet

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Product Name: AHS Human HEK  
Cat. No.: GP22695  
Batch No.: 1

### Product Data

Purity >98% Source  
Physical Appearance solid Shipping Condition

Synonyms Alpha-2-HS-glycoprotein; Fetuin-A; Alpha-2-Z-globulin; Ba-alpha-2-glycoprotein; AHS; FETUA; AHS; A2HS; HSGA; PRO2743.

Amino Acid Sequence APHGPGLIYRQPNCDDEPETEEAALVAIDYINQNLPGWGYKHTLNQIDEVKVWPQQPSGELFIEIDTLETTCHVLDPTPVARCSVRQLKEHAVEGDCDFQL

Solubility It is recommended to reconstitute the lyophilized AHS in 1xPBS to a concentration no less than 100 µg/ml, which can then be further used.  
Formulation AHS was lyophilized from a 0.2 µM filtered solution of 20mM PB and 150mM NaCl, pH 7.5.

### Introduction

Fetuin is a liver-produced negative acute phase protein composed of two subunits, the A and B chains. Fetuin homologs have been identified in several species including rat, sheep, pig, rabbit, guinea pig, cattle, mouse and human. Multiple physiological roles for these homologs have been suggested, including ability to bind to hydroxyapatite crystals and to specifically inhibit the tyrosine kinase (TK) activity of the receptor (IR). Fetuin-A (alpha2-Heremans-Schmid glycoprotein; AHS) is an important circulating inhibitor of calcification in vivo, and is downregulated during the acute-phase response. Sera from patients on long-term dialysis with low AHS concentrations showed impaired ex-vivo capacity to inhibit CaPO<sub>4</sub> precipitation. Fetuin may influence the resolution of inflammation by modulating the phagocytosis of apoptotic cells by macrophages. AHS blocks TGF-beta-dependent signaling in osteoblastic cells, and mice lacking AHS display growth plate defects, increased bone formation with age, and enhanced cytokine-dependent osteogenesis.

### Stability

Lyophilized AHS although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution AHS should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.

### Background

AHS Human Recombinant produced by transfected human cells is a single polypeptide chain containing 357 amino acids (19-367). AHS is fused to an 8 amino acid His-tag at C-terminus & purified by proprietary chromatographic techniques.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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