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## Product Data Sheet

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Product Name: AHSG  
 Cat. No.: GP22694  
 Batch No.: 1

### Product Data

Purity	>98%	Source	Purified from the human plasma.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	Alpha-2-HS-glycoprotein; Fetuin-A; Alpha-2-Z-globulin; Ba-alpha-2-glycoprotein; AHSG; FETUA; AHS; A2HS; HSGA; PRO2743.		
Solubility	It is recommended to add deionized water to prepare a working stock solution of approximately 0.5mg/ml and let the lyophilized pellet dissolve completely. Product is not sterile! Please filter the product by an appropriate sterile filter before using it in the cell culture.		
Formulation	Filtered (0.4µm) and lyophilized from 0.5 mg/ml in 20Mm Tris buffer and 200mM NaCl, pH 8.0.		

### 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 insulin receptor (IR). Fetuin-A (alpha2-Heremans-Schmid glycoprotein; AHSG) 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 AHSG concentrations showed impaired ex-vivo capacity to inhibit Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub> precipitation. Fetuin may influence the resolution of inflammation by modulating the phagocytosis of apoptotic cells by macrophages. AHSG blocks TGF-beta-dependent signaling in osteoblastic cells, and mice lacking AHSG display growth plate defects, increased bone formation with age, and enhanced cytokine-dependent osteogenesis.

### Stability

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

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Store the lyophilized protein at  $-20^{\circ}\text{C}$  . Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles. Reconstituted protein can be stored at  $4^{\circ}\text{C}$  for a limited period of time; it does not show any change after two weeks at  $4^{\circ}\text{C}$  .

### Background

The human Alpha-2-HS-Glycoprotein containing 349 a.a was purified from the human plasma. The total molecular mass is 37.3kDa (calculated without glycosylation).

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