

Fetuin A/AHSG Protein, *Macaca mulatta* (HEK293, His)

Cat. No.:	HY-P70183
Synonyms:	rMaAlpha-2-HS-glycoprotein/Fetuin A; Fetuin A; AHSG
Species:	Others
Source:	HEK293
Accession:	A0A2K6AQI2 (A19-V367)
Gene ID:	105480162
Molecular Weight:	Approximately 50.4 kDa

PROPERTIES

AA Sequence	<pre> A P H G P G L I Y R Q P N C D D P E T E E A A L V A V D Y I N Q N L P W G Y K H T L N Q I D E V K V W P Q Q P F G E M F E I E I D T L E T T C H V L D P T P V A G C R V R Q L K E H A V E G D C D F Q L L K V N G K F S V E Y A K C D S S P D S A E D V R K V C R D C P L L A P L N D T R V V H A A E A A V T A F N A Q N N G S N F Q L E E I S R A Q L V P L P P S T Y V E F T I S G T D C V A K E A T E A A N C N L L A K K Q Y G F C K A T L N E K L G G E E V A V T C T V F Q T Q P A T S Q P Q P E G A N E A V P T P V V D A D A P A S Y P V G A S G P L P T G S P I Y A H V L A A A P P V V P I H S S H Y D L R H L F M G V V S L R S P S G E A L H P R K T R S V V Q P S V G A A A G P V V P P C P G R V R H F K V </pre>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	<p>The molecular weight of Fetuin A ranges from 51 to 67 kDa, depending on the degree of glycosylation. It is a negatively charged glycoprotein circulating in the blood and extracellular fluid with several days of half-life^[1].</p> <p>Fetuin A is a hepatic secretory glycoprotein that promotes insulin resistance by inhibiting the insulin receptor tyrosine</p>
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kinase in skeletal muscle and hepatocytes, serving as an adaptor protein for saturated fatty acids and allowing them to activate Toll-like receptor 4 (TLR4), thereby inducing inflammatory signaling and insulin resistance. Fetuin A inhibits soft tissue calcification through binding of small clusters of calcium and phosphate. Fetuin A enhances phagocytosis of extracellular vesicles and apoptotic cells by vascular smooth muscle cells and macrophages, reducing both apoptosis and calcification in cells subjected to elevated extracellular concentrations of mineral ions^[1].

Fetuin A binds with a plethora of receptors and exhibits multifaceted physiological and pathological functions. It is involved in the regulation of calcium metabolism, osteogenesis, and the insulin signaling pathway. It also acts as an ectopic calcification inhibitor, protease inhibitor, inflammatory mediator, anti-inflammatory partner, atherogenic factor, and adipogenic factor, among other several moonlighting functions^[2].

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA