

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Fetuin A in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant mouse Fetuin A, recombinant human (rh) Cystatin D, rhCystatin E/M, rhCystatin S, rhCystatin SA, and rhCystatin C is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Fetuin A/AHSG
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

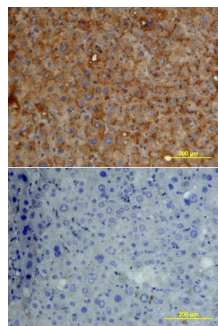
## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the [Technical Information](#) section on our website.

	Recommended Concentration	Sample
<b>Western Blot</b>	0.1 µg/mL	Recombinant Human Fetuin A/AHSG (Catalog # 1184-PI)
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below

## DATA

### Immunohistochemistry



**Fetuin A/AHSG in Human Liver.** Fetuin A/AHSG was detected in immersion fixed paraffin-embedded sections of human liver array using Goat Anti-Human Fetuin A/AHSG Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1184) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Human Fetuin A, also known as  $\alpha_2$ -Heremans-Schmid glycoprotein, is encoded by the AHSG gene. It is a major plasma protein and a member of the cystatin superfamily of protease inhibitors (1, 2). It is expressed by hepatocytes, the principal cell source, and by monocyte/macrophages (3). The major form of plasma Fetuin A corresponds to a disulfide bond-linked two chains derived from the single chain (4). Human Fetuin A has a number of functions. It is a negative acute-phase protein with normal circulating levels in adults (300-600 µg/mL), which fall significantly (30-50%) during injury and infection (5). It enhances entry of cationic inhibitors into macrophages (6). It inhibits both insulin receptor autophosphorylation and undesirable calcification (6, 7). The purified rhFetuin A corresponds to the single chain, which can be converted to the two-chain form by rhFurin (R&D Systems, Catalog # 1503-SE) *in vitro*. However, the conversion does not enhance its inhibitory activity against rhCathpesin V, a cysteine protease.

### References:

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3. Dziegielewska, K.M. *et al.* (1996) Histochem. Cell Biol. **106**:319.
4. Gejyo, F. and K. Schmid (1981) Biochim. Biophys. Acta. **671**:78.
5. Wang, H. *et al.* (1998) Proc. Natl. Acad. Sci. USA **95**:14429.
6. Mathews, S.T. *et al.* (2000) Mol. Cell Endocrinol. **164**:87.
7. Schäfer, C. *et al.* (2003) J. Clin. Invest. **112**:357.