

## AFM Protein, Human, Recombinant (His)

### General Information

Synonyms:	afamin;ALBA;ALB2;ALF
Protein Construction:	A DNA sequence encoding the human AFM (P43652) (Met1-Asn599) was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Leu 22
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P43652
Molecular Weight:	68 kDa (predicted); 68-94 kDa (reducing conditions)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/ $\mu$ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

Reconstitution:	Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.
Stability & Storage:	It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots. <small>Actual storage temperature shall be subject to the COA.</small>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Afamin is an 87 kDa glycoprotein with five predicted N-glycosylation sites. Afamin's glycan abundance contributes to conformational and chemical inhomogeneity presenting great challenges for molecular structure determination. Afamin, a human plasma glycoprotein and putative transporter of hydrophobic molecules, has been shown to act as extracellular chaperone for poorly soluble, acylated Wnt proteins, forming a stable, soluble complex with functioning Wnt proteins. The 2.1-Å crystal structure of glycosylated human afamin reveals an

almost exclusively hydrophobic binding cleft capable of harboring large hydrophobic moieties. Afamin plays a role in anti-apoptotic cellular processes related to oxidative stress and is associated with insulin resistance and other features of metabolic syndrome. Afamin may serve as a new early biomarker for pathological glucose metabolism during pregnancy. And first trimester screening for pre-eclampsia could be provided by a combination of afamin and placental bed vascularization. Moreover, the combination of first trimester serum afamin levels with BMI could provide a possible screening for gestational diabetes mellitus.

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