

# Human AFP / alpha-fetoprotein Protein (His Tag)

Catalog Number: 12177-H08H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

AFPD; Alpha-fetoprotein; FETA; HPAFP

### Protein Construction:

A DNA sequence encoding the human AFP (P02771) (Met 1-Val 609) was fused with a polyhistidine tag at the C-terminus.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 95 % as determined by SDS-PAGE

### Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Arg 19

### Molecular Mass:

The recombinant human AFP consists of 602 amino acids and has a predicted molecular mass of 67.9 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rhAFP is approximately 65 kDa.

### Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

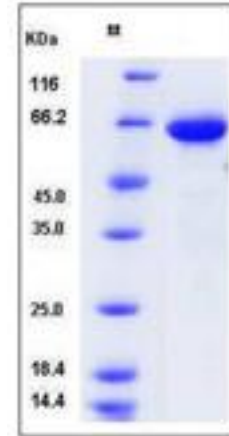
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

Alpha-fetoprotein (AFP) is classified as a member of the albuminoid gene superfamily consisting of albumin, AFP, vitamin D (Gc) protein, and alpha-albumin. AFP is a glycoprotein of 591 amino acids and a carbohydrate moiety. AFP is one of the several embryo-specific proteins and is a dominant serum protein as early in human embryonic life as one month, when albumin and transferrin are present in relatively small amounts. It is first synthesized in the human by the yolk sac and liver(1-2 months) and subsequently predominantly in the liver. A small amount of AFP is produced by the GI tract of the human conceptus. It has been proved that AFP may reappear in the serum in elevated amounts in adult life in association with normal restorative processes and with malignant growth. Alpha-fetoprotein (AFP) is a specific marker for hepatocellular carcinoma (HCC), teratoblastomas, and neural tube defect (NTD).

## References

- 1.Mizejewski GJ. (2001) Alpha-fetoprotein Structure and Function: Relevance to Isoforms, Epitopes, and Conformational Variants. *Exp Biol Med.* 226(5): 377-408.
- 2.Tomasi TB, *et al.* (1977) Structure and Function of Alpha-Fetoprotein. *Annual Review of Medicine.* 28: 453-65.
- 3.Leguy MC, *et al.* (2011) Assessment of AFP in amniotic fluid: comparison of three automated techniques. *Ann Biol Clin.* 69(4): 441-6.

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