

For Research Use Only

# Recombinant Human Alpha-1-microglobulin protein (His Tag)



Catalog Number: Eg1127

## Basic Information

**ED50:**  
/

**GeneID:**  
259

**Species:**  
Human

**Accession:**  
P02760

**Purity:**  
>90 %, SDS-PAGE

## Technical Specifications

**Purity:**  
>90 %, SDS-PAGE

**Endotoxin Level:**  
<1.0 EU/  $\mu$ g protein, LAL method

**Source:**  
HEK293-derived Human Alpha-1-microglobulin protein Gly20-Val203 (Accession# P02760) with a His tag at the C-terminus.

**Predicted Molecular Mass:**  
21.6 kDa

**SDS-PAGE:**  
27-32 kDa, reducing (R) conditions

**Formulation:**  
Lyophilized from sterile PBS, pH 7.4. Normally 5% trehalose and 5% mannitol are added as protectants before lyophilization.

## Biological Activity

Not tested

## Storage and Shipping

**Storage:**  
It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

- Until expiry date, -20°C to -80°C as lyophilized proteins.
- 3 months, -20°C to -80°C under sterile conditions after reconstitution.

**Shipping:**  
The product is shipped at ambient temperature. Upon receipt, store it immediately at the recommended temperature.

## Reconstitution

Briefly centrifuge the tube before opening. Reconstitute at 0.1-0.5 mg/mL in sterile water.

## Background

Alpha-1-microglobulin (A1M) is also named as Protein AMBP, Bikunin, Trypstatin and Inter-alpha-trypsin inhibitor light chain (ITI-LC). A1M belongs to the lipocalin protein family, a group of structural proteins with a similar one-domain fold that are found in bacteria, plants and animals (PMID: 2580349). A1M is recognized as a physiological antioxidant with powerful cell- and tissue-protective properties (PMID: 11877257). Whereas A1M is a heme and radical scavenger, and a reductase, bikunin is a structural component of extracellular matrix and has protease inhibitor and anti-inflammatory properties (PMID: 27988357). In humans, the majority of A1M is synthesized in the liver, but smaller quantities are also expressed in most other cells in the body. In the blood, equal quantities of two forms of A1M can be found: a free monomeric form and a covalent high-molecular weight complex bound to immunoglobulin A, albumin and prothrombin (PMID: 6196366, PMID: 9183005). Endogenous A1M has also been described to be localized ubiquitously in the dermal and epidermal layers of skin, and in syncytiotrophoblasts, monocytes/macrophages, vascular endothelium and extracellular matrix of placental tissue and extracellular matrix (PMID: 22096585, PMID: 21356557). A1M is found within the circulation throughout life. Serum levels of A1M are reported to be in the range 15–50 mg/ml with males having slightly higher levels than females (PMID: 2470534). Levels of A1M are, however, known to be influenced by renal and hepatic function; levels increase with impaired renal function and decrease with reduced liver function (PMID: 27988357).

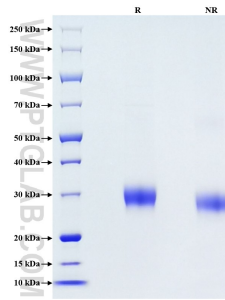
## References

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2. Allhorn M, et al. (2002) *Blood*. 99(6):1894-901.
3. Gunnarsson R, et al. (2017) *Drug Discov Today*. 22(4):736-743.
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6. Olsson MG, et al. (2011) *PLoS One*. 6(11):e27505.
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## Synonyms

AMBP, A1M, Alpha 1 microglobulin, Alpha 1 microglycop

## Selected Validation Data



Purity of Recombinant Human Alpha-1-microglobulin was determined by SDS-PAGE. The protein was resolved in an SDS-PAGE in reducing (R) and non-reducing (NR) conditions and stained using Coomassie blue.

For technical support and original validation data for this product please contact

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