

# Human Vaspin / SerpinA12 Protein (His Tag)



Sino Biological  
Biological Solution Specialist

Catalog Number: 11822-H08H

## General Information

### Gene Name Synonym:

OL-64

### Protein Construction:

A DNA sequence encoding the human SERPINA12 (NP\_776249.1) (Met 1-Lys 414) was expressed, with a polyhistidine tag at the C-terminus.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 97 % as determined by SDS-PAGE

### Bio Activity:

Measured by its ability to inhibit KLK7 cleavage the fluorogenic peptide substrate, Mca-RPKPVE-Nval-WRK(Dnp)-NH<sub>2</sub> (Catalog # ES002). The IC<sub>50</sub> is

### 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:** Leu 21

### Molecular Mass:

The recombinant human SERPINA12 consists of 405 amino acids and predicts a molecular mass of 46.5 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rh SERPINA12 is approximately 50-55 kDa due to glycosylation.

### 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:

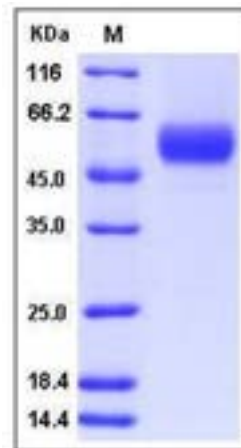
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

Serpins are the largest and most diverse family of protease inhibitors. Most serpins control proteolytic cascades, certain serpins do not inhibit enzymes, but instead perform diverse functions such as storage (ovalbumin, in egg white), hormone carriage proteins (thyroxine-binding globulin, cortisol-binding globulin) and tumor suppressor genes (maspin). Most inhibitory serpins target chymotrypsin-like serine proteases. These enzymes are defined by the presence of a nucleophilic serine residue in their catalytic site. Some serpins inhibit other classes of protease. A number of such serpins have been shown to target cysteine proteases. These enzymes differ from serine proteases in that they are defined by the presence of a nucleophilic cysteine residue, rather than a serine residue, in their catalytic site. SerpinA12, also known as OL-64, Visceral adipose tissue-derived serine protease inhibitor, Vaspin, Visceral adipose-specific serpin and SERPINA12, is a secreted protein which belongs to the serpin family. SerpinA12 / Vaspin is expressed in visceral adipose tissues. It may modulate insulin action conceivably only in the presence of its yet undefined target proteases in white adipose tissues. SerpinA12 / Vaspin may be the compensatory molecule in the pathogenesis of metabolic syndrome and SerpinA12 / Vaspin recombinant protein or vaspin-mimicking agents such as vaspin analogs, antibodies or small molecule agents may be the link to drug discovery and development.

## References

1. Han X, et al., 1998, Proc Natl Acad Sci. USA. 95: 9250-5. 2. Han X, et al., 2000, Blood 96: 3049-55. 3. Irving JA, et al., 2000, Genome Res. 10 (12): 1845-64.

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