

## Myostatin Human E. coli

### Product Data Sheet

**Type:** Recombinant

**Source:** E. coli

**Species:** Human

**Other names:** Growth/differentiation factor 8, GDF-8, MSTN

**Cat. No.:**

RD172005300

(0.1 mg)

### Description

Total 152AA, MW: 16.7 kDa (calculated). N-terminal His-tag including the spacer 43AA (highlighted). The AA sequence of the human myostatin part of the fusion protein is corresponding to the UniProtKB/Swiss-Prot entry O14793, AA267-375.

### Introduction to the Molecule

Myostatin (GDF 8) is expressed uniquely in human skeletal muscle as a 12 kDa mature glycoprotein consisting of 109 amino acid residues and secreted into plasma. Myostatin is a member of the transforming growth factor beta superfamily of secreted growth and differentiation factors that is essential for proper regulation of skeletal muscle mass. Studies have shown that myostatin could play an important role in cardiac development and physiology. In serum, myostatin circulates as part of a latent complex containing myostatin propeptide and/or follistatin-related gene. The myostatin propeptide is known to bind and inhibit myostatin in vitro. This interaction is relevant in vivo, with a majority (>70%) of myostatin in serum bound to its propeptide. The myostatin propeptide is negative regulator of myostatin in vivo.

### Research topic

Muscle growth control

### Amino Acid Sequence

MRGSHHHHHH GMASMTGGQQ MGRDLYDDDD KDPSSRS AVR SRRDFGLDCD EHSTESRCCR YPLTVDFEAF GWDWIIAPKR  
YKANYCSGEC EFVFLQKYPH THLVHQANPR GSAGPCCTPT KMSPINMLYF NGKEQIIYGK IPAMVVDRCG CS

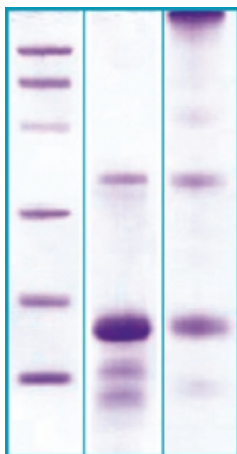
### Source

E. coli

### Purity

Purity as determined by densitometric image analysis: >95%

### SDS-PAGE gel



12% SDS-PAGE separation of Human Myostatin

1. M.W. marker - 14, 21, 31, 45, 66, 97 kDa

2. reduced and heated sample, 10µg/lane

3. non-reduced and non-heated sample, 10µg/lane

### Endotoxin

< 1.0 EU/ug

### Formulation

Filtered (0,4 µm) and lyophilized from 0.5 mg/mL in 0.05 M acetate buffer, pH 4.5

## Reconstitution

Add 0.1M Acetate buffer pH4 to prepare a working stock solution of approximately 0.5 mg/mL and let the lyophilized pellet dissolve completely. For conversion into higher pH value, we recommend intensive dilution by relevant buffer to a concentration of 10µg/mL. In higher concentrations the solubility of this antigen is limited. Product is not sterile! Please filter the product by an appropriate sterile filter before using it in the cell culture.

## Shipping

At ambient temperature. Upon receipt, store the product at the temperature recommended below.

## Storage, Stability/Shelf Life

Store lyophilized protein at -80°C. Lyophilized protein remains stable until the expiry date when stored at -80°C. Aliquot reconstituted protein to avoid repeated freezing/thawing cycles and store at -80°C for long term storage. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after one week at 4°C.

## Quality Control Test

BCA to determine quantity of the protein.

SDS PAGE to determine purity of the protein.

LAL to determine quantity of endotoxin.

## Applications

ELISA, Western blotting

## Note

This product is intended for research use only. The Certificate of Analysis is available on [www.biovendor.com](http://www.biovendor.com)

## References to this Product

- Matsakas A, Bozzo C, Cacciani N, Caliaro F, Reggiani C, Mascarello F, Patruno M . *Effect of swimming on myostatin expression in white and red gastrocnemius muscle and in cardiac muscle of rats.* [Exp Physiol](#) . Nov;91(6):983-94 (2006)
- Artaza JN, Bhasin S, Magee TR, Reisz-Porszasz S, Shen R, Groome NP, Meerasahib MF, Gonzales-Cadauid NF . *Myostatin inhibits myogenesis and promotes adipogenesis in C3H 10T(1/2) mesenchymal multipotent cells.* [Endocrinology](#) . Aug;146(8):3547-57 (2005)
- Ramazanov Z, Jimenez del Rio M, Ziegenfuss T . *Sulfated polysaccharides of brown seaweed Cystoseira canariensis bind to serum myostatin protein.* *Acta Physiol Pharmacol Bulg* 27(2-3) . 101-106 (2003)

<b>HEADQUARTERS:</b> BioVendor Laboratorní medicína, a.s.	Karasek 1767/1	621 00 Brno CZECH REPUBLIC	Phone: +420-549-124-185 Fax: +420-549-211-460	E-mail: info@biovendor.com sales@biovendor.com Web: www.biovendor.com
AUSTRIA: BioVendor GesmbH	Nußdorfer Straße 20/10	1090 Vienna AUSTRIA	Phone: +43-1-89090-25 Fax: +43-1-89090-2515	E-mail: infoAustria@biovendor.com
GERMANY, SWITZERLAND: BioVendor GmbH	Otto-Hahn-Straße 16	34123 Kassel GERMANY	Phone: +49-6221-433-9100 Fax: +49-6221-433-9111	E-mail: infoEU@biovendor.com
USA, CANADA AND MEXICO: BioVendor LLC	128 Bingham Rd. Suite 1300	Asheville, NC 28806 USA	Phone: +1-828-575-9250 +1-800-404-7807 Fax: +1-828-575-9251	E-mail: infoUSA@biovendor.com