

PRODUCT DATASHEET

Myostatin Human HEK293

Cat. No.: RD172005100-HEK

Type: Recombinant protein

Size: 0.1 mg

Source: HEK293

Species: Human

Description

Total 360 AA. MW: 41.1 kDa (calculated). UniProtKB acc. No. O14793 (Asn24–Ser375). N-terminal His-tag (6 extra AA) and N-terminal linker (2 extra AA). Protein identity confirmed by LC-MS/MS.

Other names

Growth/differentiation factor 8, GDF-8, MSTN

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 β 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

Animal studies, Cardiovascular disease, Energy metabolism and body weight regulation, Muscle growth and physiology regulation, Pulmonary diseases

Amino Acid sequence

HHHHHHASNE NSEQKENVEK EGLCNACTWR QNTKSSRIEA IKIQILSKLR LETAPNISKD VIRQLLPKAP PLRELIDQYD VQRDDSSDGS
LEDDDYHATT ETIITMPTEs DFLMQVDGPK KCCFFKFSK IQYNKVKAQ LWIYLRPVET PTTVFVQILR LIKPMKDGTR YTGIRSLKLD
MNPGTGIWQS IDVKTVLQNW LKQPESNLGI EIKALDENGH DLAVTFPGPG EDGLNPFLEV KVTDTPKRSR RDFGLDCDEH STESRCCRYP
LTVDFEAFGW DWIIPKRYK ANYCSGECEF VFLQKYPHTH LVHQANPRGS AGPCCTPTKM SPINMLYFNG KEQIYGKIP AMVVDRCGCS

Purity

Purity as determined by densitometric image analysis: > 95 %

Endotoxin

< 0.1 EU/ μ g

Formulation:

Frozen from 0.25–0.5 mg/ml solution in phosphate buffered saline (PBS) pH 8.0 with 20 % (w/v) glycerol.

Reconstitution:

Defrost at ambient temperature. Filter sterilize your culture media/working solutions containing this non-sterile product before using in cell culture.

Shipping

On ice. Upon receipt, store the product at the temperature recommended below.

Storage, Stability/Shelf Life

Store protein at -80°C . Protein remains stable until the expiry date when stored at -80°C . Avoid repeated freezing/thawing cycles. The thawed protein can be stored at 4°C for three days.

Quality control

BCA to determine quantity of the protein.

SDS PAGE to determine purity of the protein.

LAL to determine quantity of endotoxin.

Applications

Cell culture and/or animal studies, ELISA, Western blotting

Note

This product is intended for research use only.



14 % SDS-PAGE separation of Human Myostatin (HEK):

1. M.W. marker – 14, 21, 31, 45, 66, 97 kDa
2. Reduced and boiled sample, 2.5 $\mu\text{g}/\text{lane}$
3. Non-reduced and non-boiled sample, 2.5 $\mu\text{g}/\text{lane}$