Myostatin Human HEK293

Product Data Sheet

Type: Recombinant
Source: HEK293
Species: Human
Other names: Growth/differentiation factor 8, GDF-8, MSTN

Cat. No.:
RD172005100-HEK (0.1 mg)

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.

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

HHHHHHASNE NSEQKENVEK EGLCNACTWR QNTKSSRIEA IKIQILSKLR LETAPNISKD VIRQLLPKAP PLRELIDQYD
VQRDDSSDGS LEDDDYHATT ETIITMPTES DFLMQVDGKP KCCFFKFSSK IQYNKVVKAQ LWIYLRPVET PTTVFVQILR
LIKPMKDGTR YTGIRSLKLD MNPGTGIWQS IDVKTVLQNW LKQPESNLGI EIKALDENGH DLAVTFPGPG EDGLNPFLEV
KVTDTPKRSR RDFGLDCDEH STESRCCRYP LTVDFEAFGW DWIIAPKRYK ANYCSGECEF VFLQKYPHTH LVHQANPRGS
AGPCCTPTKM SPINMLYFNG KEQIIYGKIP AMVVDRCGCS

Source

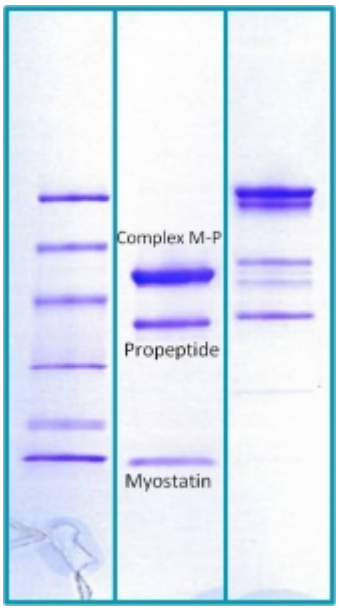
HEK293

Purity

Purity as determined by densitometric image analysis: > 95 %

SDS-PAGE gel

The approx. 50 kDa band represents the complex of Myostatin-Propeptide. The band corresponding to approx. 38 kDa represents cleaved form of Propeptide and similrally the approx. 12 kDa band belongs to cleaved Myostatin domain. Myostatin domains makes dimmers in non-reducing conditions resulting in bends of approx. 25 and 97 kDa, respectively.



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 µg/lane
3. Non-reduced and non-boiled sample, 2.5 µg/lane

Endotoxin

< 1.0 EU/µg

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

Quality Control Test

BCA to determine quantity of the protein.
SDS-PAGE to determine purity of the protein.
LAL TEST to determine endotoxin level.

Applications

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

Note

This product is intended for research use only.

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