

Active Recombinant Human Myostatin

Cat. No. MSTN-34H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Myostatin (GDF8, MSTN) is a member of the transforming growth factor beta superfamily that is essential for proper regulation of skeletal muscle mass. Myostatin is a secreted protein that negatively regulates skeletal muscle mass determining both muscle fiber number and size. Recombinant Human Myostatin also called GDF-8 produced in E.Coli is a homodimer, non-glycosylated polypeptide chain containing 2 x 109 amino acids and having a total molecular mass of 24814 Dalton.

Species Human

Source E.coli

Description

Myostatin (also known as growth differentiation factor 8, abbreviated "GDF8") is a secreted TGF beta protein family member that inhibits muscle differentiation and growth. Myostatin is produced primarily in skeletal muscle cells, circulates in the blood and acts on muscle tissue, by binding a cell-bound receptor called the activin type II receptor. In humans, myostatin is encoded by the MSTN gene.

Form Lyophilized with no additives.

Purity Purity Greater than 95% as determined by: Analysis by RP-HPLC. Reducing and non-reducing SDS-PAGE.

Bio-activity

Recombinant Human Myostatin is fully biologically active when compared to standard. The ED50 as determined by the inhibition of the proliferation of MPC-11 cells is < 20 ng/ml.

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Physical Appearance	Sterile Filtered white lyophilized (freeze-dried) powder.
Solubility	Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at a concentration of 0.1 mg/ml, which can be further diluted into other aqueous solutions.
Purity Greater than 95% as determined by	Analysis by RP-HPLC. Reducing and non-reducing SDS-PAGE.
Protein Content determined by	UV spectroscopy at 280 nm. Analysis by RP-HPLC calibrated against a known standard. Quantitation on SDS-PAGE against a known standard.
Endotoxin Level	Endotoxin level as measured by LAL is <0.01ng/ug or <0.1EU/ug.
Amino acid sequence	DFGLDCDEHS TESRCCRYPL TVDFEAFGWD WIIAPKRYKA NYCSGECEFV FLQKYPHTHL VHQANPRGSA GPCCTPTKMS PINMLYFNGK EQIYGGKIPA MVVDRCGCS
Storage	Lyophilized product is very stable at -20°C. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended to add a carrier protein (0.1% HSA or BSA) for long term storage.

GENE INFORMATION

Gene Name	MSTN myostatin [Homo sapiens]
Official Symbol	MSTN
Synonyms	MSTN; myostatin; GDF8; growth differentiation factor 8; GDF-8;

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OTTHUMP00000163498	
Gene ID	2660
mRNA Refseq	NM_005259
Protein Refseq	NP_005250
MIM	602642
UniProt ID	O14788
Chromosome Location	2q32.2
Pathway	Hypertrophy Model
Function	cytokine activity; growth factor activity; receptor binding; contributes_to receptor binding

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