

**BACKGROUND**

Myostatin is a member of the TGF- $\beta$  superfamily that is essential for proper regulation of skeletal muscle mass in a number of species ranging from fish to humans. Myostatin is a secreted protein that negatively regulates skeletal muscle mass determining both muscle fiber number and size. Inhibition of myostatin can increase muscle mass in a number of animal models of human disease, including muscular dystrophy.

Recombinant human myostatin is a non-glycosylated homodimer, containing two 109 amino acids and having a total molecular mass of 24.8 kDa.

**Alternative Names:**

GDF-8, MSTN

**Amino Acid Sequence:**

DFGLDCDEHS TESRCCRYPL TVDFEAFGWD WIIAPKRYKA  
NYCSGECEFV FLQKYPHTL VHQANPRGSA GPCCTPTKMS  
PINMLYFNGK EQIYGKIPA MVVDRCGCS

**TECHNICAL INFORMATION**

**Source:** *E.coli*

**Physical Appearance:**

Sterile Filtered white lyophilized (freeze-dried) powder.

**Formulation:**

Recombinant human Myostatin is lyophilized with no additives.

**Stability:**

Lyophilized product is very stable at -20°C. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended that a carrier protein (0.1% HSA or BSA) is added for long term storage.

**Reconstitution:**

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 20 mM HCl at a concentration of 0.1 mg/ml, which can be further diluted into other aqueous solutions.

**Protein Content and Purity determined by:**

- UV spectroscopy at 280 nm
- RP-HPLC calibrated against a known standard
- Quantitation against a known standard via reducing and non-reducing SDS-PAGE gels.

**Endotoxin Level:**

Endotoxin level, as measured by LAL analysis, is <0.01ng/ug or <0.1EU/ug.

**Biological Activity:**

The activity is determined by the inhibition of the proliferation of MPC-11 cells and is typically less than 20 ng/mL.

*Products are for research use only. They are not intended for human, animal, or diagnostic applications.*

