

# Recombinant Human Myostatin

**Synonyms:** GDF-8, MSTN, Growth Differentiation Factor 8, MSTN Muscle Hypertrophy.

**Introduction:** GDF8 is a member of the bone morphogenetic protein (BMP) family and the TGF-beta superfamily. This group of proteins is characterized by a polybasic proteolytic processing site which is cleaved to produce a mature protein containing seven conserved cysteine residues. The members of this family are regulators of cell growth and differentiation in both embryonic and adult tissues. This gene is thought to encode a secreted protein which negatively regulates skeletal muscle growth.

**Description:** Recombinant human Myostatin produced in *E. coli* is a homodimer, non-glycosylated polypeptide chain containing 2 x 10<sup>9</sup> amino acids and having a total molecular mass of 24.8 kDa.

**Source:** *Escherichia Coli*

**Physical Appearance:** Sterile filtered white lyophilized (freeze-dried) powder.

**Formulation:** Lyophilized from a concentrated (1 mg/ml) solution containing no additives. The aliquots of 1 µg and 2 µg contain Trehalose 5% (w/vol) for better recovery

**Solubility:** It is recommended to reconstitute the lyophilized Myostatin in **sterile 20mM HCl** not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

**Stability:** Lyophilized rh Myostatin although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

**Purity:** Greater than 95.0% as determined by RP-HPLC and by SDS-PAGE.

**Amino acid sequence:** The sequence of the first five N-terminal amino acids was determined and was found to be Asp-Phe-Gly-Leu-Asp.

**Biological Activity:** The ED<sub>50</sub> as determined by the inhibition of the proliferation of MPC-11 cells is < 20 ng/ml.

**Protein content:** Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm using the absorbency value of 1.55 as the extinction coefficient for a 0.1% (1 mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
2. Analysis by RP-HPLC, using a calibrated solution of Myostatin as a Reference Standard.

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<i>small</i>	2 µg	Cat.N°	11343462
<i>medium</i>	10 µg	Cat.N°	11343463

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