Mouse GDF-8 / Myostatin / MSTN Protein (Fc Tag)

Catalog Number: **50441-M01H**

Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

Cmpt, Gdf8, MGC124261, MGC124262, MGC124263

Protein Construction:

A DNA sequence encoding the mature form of mouse MSTN (NP_034964.1) (Asp 268-Ser 376) was fused with the Fc region of human IgG1 at the N-terminus.

Source: Mouse

Expression Host: Human Cells

QC Testing

Purity: > 92 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Glu 20

Molecular Mass:

The recombinant mouse MSTN/Fc is a disulfide-linked homodimeric protein. The reduced monomer consists of 369 amino acids and has a predicted molecular mass of 40.8 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rmMSTN/Fc monomer is approximately 45 kDa.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

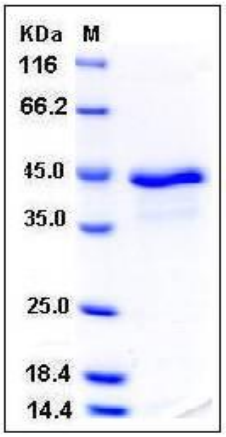
Usage Guide

Storage:

Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Growth / differentiation factor 8, also known as GDF-8, Myostatin, MSTN and GDF8, is a secreted protein which belongs to theTGF-beta family. MSTN / GDF8 is a secreted TGF beta protein family member that inhibits muscle differentiation and growth. MSTN / GDF8 is produced primarily in skeletal muscle cells. It circulates in the blood and acts on muscle tissue, by binding a cell-bound receptor called the activin type II receptor. Animals lacking myostatin or animals treated with substances such as follistatin that block the binding of myostatin to its receptor have significantly larger muscles. MSTN / GDF8 is active in muscles used for movement (skeletal muscles) both before and after birth. MSTN / GDF8 normally restrains muscle growth, ensuring that muscles do not grow too large. Mutations that reduce the production of functional MSTN / GDF8 lead to an overgrowth of muscle tissue. MSTN-related muscle hypertrophy has a pattern of inheritance known as incomplete autosomal dominance. People with a mutation in both copies of the MSTN gene in each cell (homozygotes) have significantly increased muscle mass and strength. People with a mutation in one copy of the MSTN gene in each cell (heterozygotes) also have increased muscle bulk, but to a lesser degree.

References

1. Gonzalez-CNF, et al.,1998,Proc.Natl. Acad. Sci.USA.95 (25):14938-43.
2. Schuelke M, et al., 2004, N Engl J Med350 (26): 2682-8.
3. Carnac G, et al., 2006, Mini Rev Med Chem.6 (7): 765-70.
4. Joulia-Ekaza D, et al., 2007, Curr Opin Pharmacol7 (3): 310-5.
5. Kota J, et al., 2009, Science Translational Medicine1. (6): 6ra15-6ra15.