GFH22AF Recombinant Human Myostatin (Animal-Free)

Description

Myostatin, also known as GDF-8, is a conserved member of the TGF-beta superfamily. Myostatin is an essential regulator of skeletal muscle mass and cardiac muscle development and function. Myostatin is a secreted protein that negatively regulates skeletal muscle growth by determining muscle fiber number and size. Myostatin binds one of the two activin type II receptors (ACTRIIA or ACTRIIB) to activate SMAD signaling. Myostatin also activates MAPK signaling through TAK1-MKK6 and Ras pathways. Inhibition of myostatin increases muscle mass in a number of human disease animal models, such as muscular dystrophy.

This product is produced with no animal derived raw products. All processing and handling employs animal free equipment and animal free protocols.

Length	109/218 aa
Molecular weight	12.4/24.8 kDa
Source	*E. coli*
Accession number	O14793
Purity	≥95% determined by reducing and non-reducing SDS-PAGE

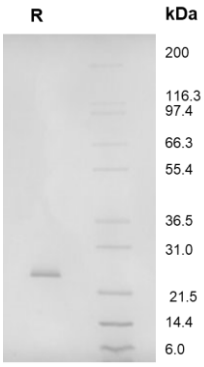
Specifications

Alternative names	GDF-8, MSTN
Biological activity	Human Myostatin is fully biologically active when compared to standard. The activity is determined by the dose-dependent cytotoxicity of MPC-11 cells and it is typically less than 50 ng/ml. This corresponds to an expected specific activity of ≥ 2.0 x 10^4 units/mg.
Endotoxin level	≤0.1 EU/µg as measured by kinetic LAL
Formulation	Lyophilized from a 0.2 µm filtered solution containing 0.1% Trifluoroacetic Acid (TFA)
AA sequence	DFGLDCDEHS TESRCCRYPL TVDFEAFGWD WIIAPKRYKA NYCSGECEFV FLQKYPHTHL VHQANPRGSA GPCCTPTKMS PINMLYFNGK EQIIYGKIPA MVVDRCGCS

Preparation and 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 sterile 20 mM HCl at 0.1 mg/mL, which can be further diluted into other aqueous solutions. If a precipitate is observed, centrifuge the solution thoroughly and use only the soluble fraction (removing it from the precipitate). A 10% overfill has been added to compensate for any loss of protein in the precipitate.
Stability and Storage	12 months from date of receipt when stored at -20°C to -80°C as supplied. 1 month when stored at 4°C after reconstituting as directed. 3 months when stored at -20°C to -80°C after reconstituting as directed.

Data



SDS-PAGE Showing a Single Prominent Band at 24.8 kDa

rh Myostatin (1µg) was resolved with SDS-PAGE under reducing (R) conditions and visualized by Instant Blue staining showing a single prominent band at 24.8 kDa.