

GFH22 Recombinant Human Myostatin / GDF-8

Description

Myostatin, also known as GDF-8, a conserved member of the TGF- β superfamily, 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, 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.

Length	109 / 218 aa
Molecular Weight	12.8 / 24.8 kDa
Source	E. coli
Accession Number	O14793(267-375)
Purity	$\geq 95\%$ determined by reducing and non-reducing SDS-PAGE

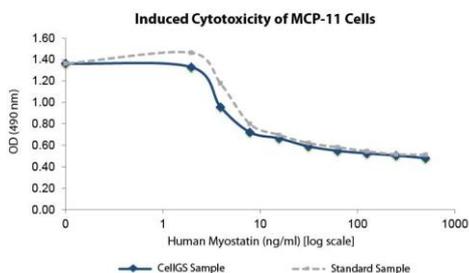
Specifications

Alternative Names	Fibroblast Growth Factor 8, FGF8, FGF 8, androgen-induced growth factor, AIGF, heparin-binding growth factor 8, HBGF-8
Biological Activity	Human Myostatin is fully biologically active when compared to standard. The activity is determined by induced cytotoxicity of MPC-11 cells and it is typically less than 50 ng/ml. This corresponds to an expected specific activity of 2.0×10^4 units/mg.
Endotoxin Level	≤ 1.00 EU/ μ g as measured by kinetic LAL
Formulation	Lyophilized from a sterile (0.2 micron) filtered aqueous solution containing 5 mM sodium phosphate, 50 mM sodium chloride, pH 7.5
AA Sequence	DFGLDCDEHS TESRCCRYPL TVDFEAFGWD WIIAPKRYKA NYCSGECEFV FLQKYPHTHL VHQANPRGSA GPCCTPTKMS PINMLYFNGK EQIYYGKIPA MVVDRCGCS

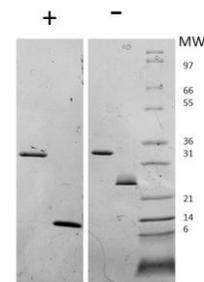
Preparation and Storage

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 water at 0.1 mg/ml, which can be further diluted into other aqueous solutions.
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



Induced cytotoxicity of MPC-11 cells assay for Human Myostatin. Cell proliferation was measured to calculate the ED50, which is as expected less than 50 ng/ml.



Non-reducing (-) and reducing (+) conditions in a 4 - 20% Tris-Glycine gel stained with Coomassie Blue. 1 μ g of protein was loaded in each lane. Human Myostatin Propeptide has a predicted Mw of 27.8 kDa (but runs higher in the gel) and Myostatin has a predicted Mw of 24.8 kDa (each monomer is 12.4 kDa).