

GFH57

Recombinant Human GDF-11 / BMP-11

Description

Growth Differentiation Factor 11 (GDF-11), also known as BMP-11, is a regulator of cell growth and differentiation during muscular and neural development. GDF-11 binds the Transforming Growth Factor β receptors ALK4, ALK5, and ALK7 to activate SMAD signaling. In adults, exogenous GDF-11 promotes cardiomyocyte regeneration to reverse age-related cardiac hypertrophy.

Length	109 / 218 aa
Molecular Weight	12.5 / 24.9 kDa
Source	E. coli
Accession Number	O95390
Purity	$\geq 95\%$ determined by reducing and non-reducing SDS-PAGE

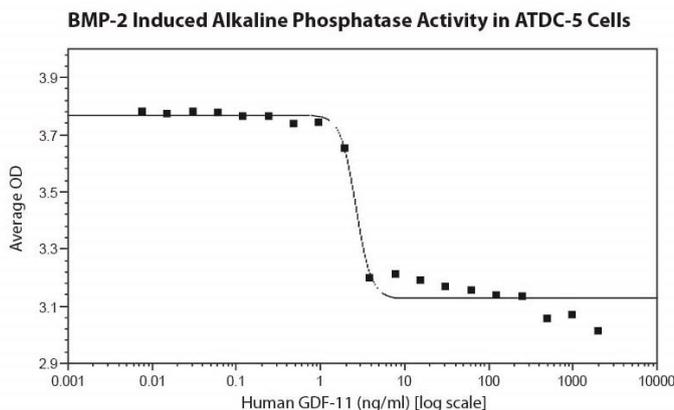
Specifications

Alternative Names	Growth Differentiation Factor 11, GDF11, GDF 11, Bone Morphogenic Protein 11, BMP11, BMP-11, BMP 11
Biological Activity	Human GDF-11 is fully biologically active when compared to standard. The activity is determined by the ability to decrease alkaline phosphatase activity in ATDC5 cells and it is typically less than 100 ng/ml. This corresponds to an expected specific activity of 1.0×10^4 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 0.1% Trifluoroacetic Acid (TFA)
AA Sequence	NLGLDCDEHS SESRCCRYPL TVDFEAFGWD WIIAPKRYKA NYCSGQCEYM FMQKYPHTHL VQQANPRGSA GPCCTPTKMS PINMLYFNDK QQIITYGKIPG MVVDRCGCS

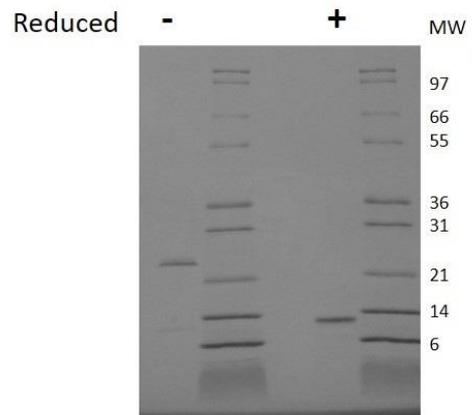
Preparation and Storage

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 10 mM HCl 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 alkaline phosphatase activity in ATDC5 cells (with $1 \mu\text{g}$ of BMP-2 and 0.5% calf serum) for Human GDF-11. Alkaline phosphatase activity was measured to calculate the ED50.



Non-reducing (-) and reducing (+) conditions in a 4 - 20% Tris-Glycine gel stained with Coomassie Blue. $1 \mu\text{g}$ of protein was loaded in each lane. Human GDF-11 has a predicted Mw of 24.9 kDa (each monomer is 12.5 kDa).