

GFH71

Recombinant Human GDF-5 / BMP-14

Description

Growth Differentiation Factor 5 (GDF-5), also known as BMP-14, is a member of the Bone Morphogenic Protein (BMP) and Transforming Growth Factor β (TGF- β) families and functions to regulate cell proliferation and differentiation in embryonic and adult tissues. GDF-5 is expressed in the central nervous system and promotes the survival of dopaminergic neurons in animal models of Parkinson's disease. GDF-5 is also important during chondrogenesis and chondrocyte differentiation.

Length	121 / 242 aa
Molecular Weight	13.7 / 27.4 kDa
Source	E. coli
Accession Number	P43026
Purity	\geq 95% determined by reducing and non-reducing SDS-PAGE

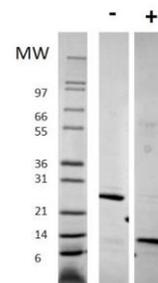
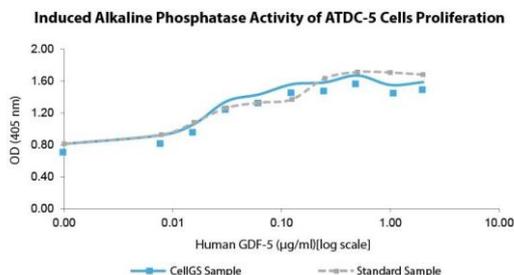
Specifications

Alternative Names	Growth Differentiation Factor 5, GDF5, GDF 5, Bone Morphogenic Protein 14, BMP14, BMP-14, BMP 14, CDMP-1, CDMP1, SYNS2, cartilage-derived morphogenetic protein 1, cartilage-derived morphogenetic protein-1, radotermin, LAP4, OS5
Biological Activity	Human GDF-5 is fully biologically active when compared to standard. The activity is determined by the ability to induce alkaline phosphatase activity in ATDC5 cells and it is typically between 0.1 - 1 μ g/ml. This corresponds to an expected specific activity of 1×10^4 units/mg.
Endotoxin Level	\leq 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	MAPLATRQGK RPSKNLKARC SRKALHVNFK DMGWDDWIIA PLEYEAFHCE GLCEFPLRSH LEPTNHAVIQ TLMNSMDPES TPPTCCVPTR LSPISILFID SANNVVYKQY EDMVVESCGC R

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 alkaline phosphatase activity in ATDC5 cells (with 2 μ g/ml heparin) for Human GDF-5. Alkaline phosphatase activity was measured to calculate the ED50, which is as expected less than 1 μ g/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 GDF-5 has a predicted Mw of 27.4 kDa (each monomer is 13.7 kDa).