PRODUCT INFORMATION

GDF11 (human recombinant)
Item No. 16102

Overview and Properties

Synonyms: BMP11, Growth/Differentiation Factor 11
Source: Recombinant protein expressed in E. coli
Uniprot No.: O95390
Amino Acids: 299-407 (mature form)

Batch specific information can be found on the Batch Specific Insert, Certificate of Analysis, or by contacting Technical Support

Molecular Weight: 12.5 kDa
Storage: -80°C (as supplied)
Stability: As supplied, 1 year from the QC date provided on the Certificate of Analysis, when stored properly
Purity: batch specific (≥90% estimated by SDS-PAGE)
Formulation: Lyophilized. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Keep pH below 5.0. Do not vortex.

Biological Activity: Determined by its ability to inhibit induced alkaline phosphatase production by ATDC-5 chondrogenic cells. The ED_{50} value for this effect is 0.08-0.10 µg/ml.

Protein Concentration: batch specific mg/ml

Description

Bone morphogenetic proteins (BMP) are secreted signaling proteins, many of which are involved in various developmental processes, in addition to bone formation.\textsuperscript{1} GDF11 is a circulating growth and differentiation factor that has age-dependent effects on development. Notably, injection of recombinant GDF11 into old mice, so that circulating levels match those in young mice, enhances vascularization in the brain, increases vessel volume, increases neural stem cell populations, and reverses cardiac hypertrophy.\textsuperscript{2,3} These changes mimic the changes in vascular remodeling, neurogenesis, and olfactory function that are produced by providing young blood to aged mice.\textsuperscript{2,3} In mouse embryos, GDF11 has critical roles in patterning mesodermal, skeletal, and neural tissues.\textsuperscript{4-6}

References
