Beijing Solarbio Science & Technology Co., Ltd
Tel: 400-968-6088
Fax: 010-56371281
Http://www.solarbio.com

Recombinant Human GDF-5

Catalog#:P00554 Derived from *E.coli*

DESCRIPTION	Recombinant Human Growth/Differentiation Factor 5 is produced by our *E.coli* expression system and the target gene encoding Ala382-Arg501 is expressed. **Accession#**: P43026 **Known as**: Growth/differentiation factor 5; GDF-5; Bone morphogenetic protein 14; BMP-14; Cartilage-derived morphogenetic protein 1; CDMP-1; Lipopolysaccharide-associated protein 4; LAP-4; LPS-associated protein 4; Radotermin; CDMP1
FORMULATION	Lyophilized from a 0.2μm filtered solution of 4mM HCL.
SHIPPING	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature listed below.
STORAGE	Lyophilized protein should be stored at ≤ -20°C, stable for one year after receipt. Reconstituted protein solution can be stored at 2-8°C for 2-7 days. Aliquots of reconstituted samples are stable at ≤ -20°C for 3 months.
RECONSTITUTION	*Always centrifuge tubes before opening. Do not mix by vortex or pipetting.* *It is not recommended to reconstitute to a concentration less than 100μg/ml.* Dissolve the lyophilized protein in distilled water. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.
QUALITY CONTROL	**Mol Mass**:13.7kDa **AP Mol Mass**:15kDa, reducing conditions. **Purity**: Greater than 90% as determined by reducing SDS-PAGE. **Endotoxin**: Less than 0.1ng/μg (1 EU/μg) as determined by LAL test.
BACKGROUND	Growth Differentiation Factor 5(GDF-5, BMP-14) is a member of the BMP family of TGFβ superfamily proteins. Human GDF-5, -6, and -7 are a defined subgroup of the BMP family. GDF-5 is synthesized as a homodimeric precursor protein consisting of a 354 amino acid (aa) Nterminal proregion and a 120 aa C-terminal mature peptide. Mature human GDF-5 shares 99% aa sequence identity with both mature mouse and rat GDF-5. GDF-5 signaling is mediated by formation of a heterodimeric complex consisting of a type 1 (BMPR-IB) and a type II (BMPR-IIor Activin RII) serine/threonine kinase receptor which results in the phosphorylation and activation of cytosolic Smad proteins (Smad1, 5, and 8). GDF-5 is involved in multiple developmental processes including limb generation, cartilage development, joint formation, bone morphogenesis, cell survival, and neuritogenesis. Inhibition of GDF-5 expression or alteration of its signaling can facilitate the development of osteoarthritis.

SDS-PAGE