

Product datasheet for **TP727601**

GDF 5 (GDF5) Human Recombinant Protein

Product data:

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| Product Type: | Recombinant Proteins |
| Description: | Recombinant Human GDF-5/BMP-14 |
| Species: | Human |
| Expression cDNA Clone or AA Sequence: | Ala382-Arg501 |
| Buffer: | Lyophilized from a 0.2 um filtered solution of 4mM HCl. |
| Note: | Recombinant Human Growth/Differentiation Factor 5 is produced by our E.coli expression system and the target gene encoding Ala382-Arg501 is expressed. |
| Storage: | Lyophilized protein should be stored at < -20°C, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 4-7°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months. |
| Stability: | 12 months from date of despatch |
| Locus ID: | 8200 |
| UniProt ID: | P43026 |
| Synonyms: | 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 |
| Summary: | Growth Differentiation Factor 5(GDF-5, BMP-14) is a member of the BMP family of TGF β 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 (BMPRII) and a type II (BMPRI or 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. |



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Protein Families: Adult stem cells, Cancer stem cells, Druggable Genome, Embryonic stem cells, ES Cell Differentiation/IPS, Secreted Protein, Stem cell relevant signaling - TGFb/BMP signaling pathway

Protein Pathways: Cytokine-cytokine receptor interaction, TGF-beta signaling pathway