## PRODUCT INFORMATION

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|---|---|
| **Target** | GDF-5 |
| **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 |
| **Description** | Recombinant Human Growth/Differentiation Factor 5 is produced by our E.coli expression system and the target gene encoding Ala382-Arg501 is expressed. |
| **Delivery** | In Stock |
| **Uniprot ID** | P43026 |
| **Expression Host** | E.coli |
| **Tag** | |
| **Molecular Characterization** | Not available |
| **Molecular Weight** | 13.7 KDa |
| **Purity** | Greater than 95% as determined by reducing SDS-PAGE. |
| **Formulation & Reconstitution** | Lyophilized from a 0.2 μm filtered solution of 4mM HCl. |
| **Storage&Shipping** | Store at -20°C to -80°C for 12 months in lyophilized form. After reconstitution, if not intended for use within a month, aliquot and store at -80°C (Avoid repeated freezing and thawing). Lyophilized proteins are shipped at ambient temperature. |
| **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. |
| **Usage** | Research use only |
| **Conjugate** | Unconjugated |

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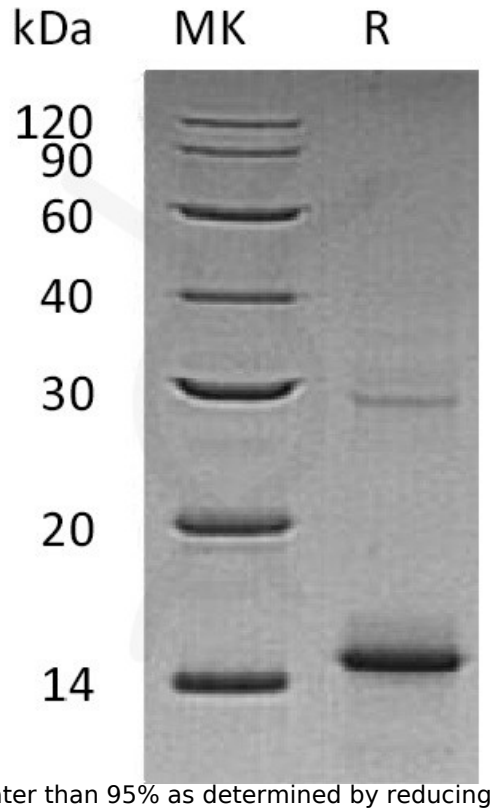



Figure 1. Greater than 95% as determined by reducing SDS-PAGE.

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