

## PRODUCT INFORMATION

<b>Target</b>	GDF-5
<b>Synonyms</b>	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;Radotermis;CDMP1
<b>Description</b>	Recombinant Human Growth/Differentiation Factor 5 is produced by our E.coli expression system and the target gene encoding Ala382-Arg501 is expressed.
<b>Delivery</b>	In Stock
<b>Uniprot ID</b>	P43026
<b>Expression Host</b>	E.coli
<b>Tag</b>	
<b>Molecular Characterization</b>	Not available
<b>Molecular Weight</b>	13.7 KDa
<b>Purity</b>	Greater than 95% as determined by reducing SDS-PAGE.
<b>Formulation &amp; Reconstitution</b>	Lyophilized from a 0.2 $\mu$ m filtered solution of 4mM HCl.
<b>Storage &amp; Shipping</b>	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.
<b>Background</b>	Growth Differentiation Factor 5(GDF-5, BMP-14) is a member of the BMP family of TGF $\beta$ 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 I (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.
<b>Usage</b>	Research use only
<b>Conjugate</b>	Unconjugated



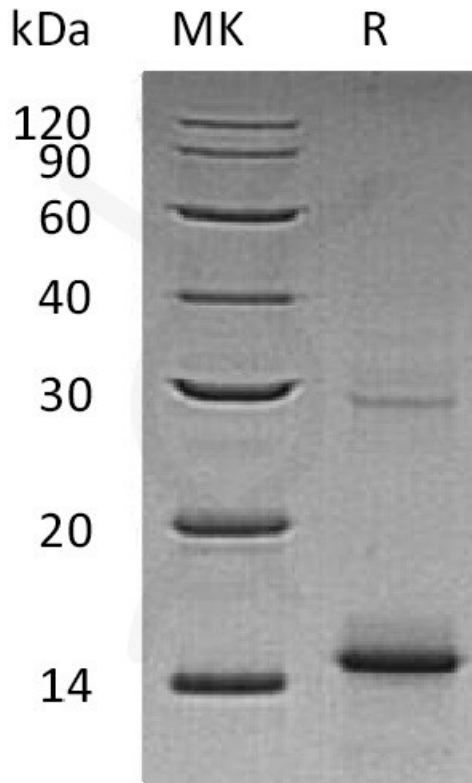


Figure 1. Greater than 95% as determined by reducing SDS-PAGE.

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