

## Active Recombinant Human GDF2 protein

**Cat. No.** GDF2-27488TH    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant human GDF-2 is a 24.1 kDa disulfide linked homodimeric protein consisting of two 110 amino acid polypeptide chains.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Source</b>           | CHO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Description</b>      | GDF-2 belongs to the TGF- $\beta$ cytokine family whose members play an important role during prenatal development and postnatal growth, remodeling and maintenance of a variety of tissues and organs. GDF-2 is expressed mainly in nonparenchymal cells of the liver, but is also found in other various cells and tissues. GDF-2 can signal through the ALK1 receptor and has been implicated in a number of physiologic events. These include regulation of the hepatic reticuloendothelial system, glucose homeostasis, and iron homeostasis, as well as the inhibition of angiogenesis. |
| <b>Form</b>             | Sterile filtered through a 0.2 micron filter. Lyophilized with no additives.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Bio-activity</b>     | Determined by its ability to induce alkaline phosphatase production by ATDC-5 cells. The expected ED50 for this effect is 0.5-1.9 ng/ml.                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>AA Sequence</b>      | SAGAGSHCQ KTSLRVNFE DIGWDSWII APKEYEAYE CKGGCFFPL ADDVTPTKH<br>AIVQTLVHL KFPTKVGKA CCVPTKLSP ISVLYKDDM GVPTLKYHY EGMSVAECG<br>CR                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Endotoxin</b>        | Endotoxin level is < 0.1 ng/ $\mu$ g of protein (<1EU/ $\mu$ g).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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|                       |                                                                                                                                                                                                                                                                                                         |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>         | Above 95% as determined by SDS-PAGE Analysis.                                                                                                                                                                                                                                                           |
| <b>Storage</b>        | Store at -20 centigrade.                                                                                                                                                                                                                                                                                |
| <b>Reconstitution</b> | Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20 centigrade to -80 centigrade |

## GENE INFORMATION

|                            |                                                                                                                                  |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>           | GDF2 growth differentiation factor 2 [ Homo sapiens ]                                                                            |
| <b>Official Symbol</b>     | GDF2                                                                                                                             |
| <b>Synonyms</b>            | GDF2; growth differentiation factor 2; growth/differentiation factor 2; BMP 9; BMP9; GDF-2; bone morphogenetic protein 9; BMP-9; |
| <b>Gene ID</b>             | 2658                                                                                                                             |
| <b>mRNA Refseq</b>         | NM_016204                                                                                                                        |
| <b>Protein Refseq</b>      | NP_057288                                                                                                                        |
| <b>MIM</b>                 | 605120                                                                                                                           |
| <b>UniProt ID</b>          | Q9UK05                                                                                                                           |
| <b>Chromosome Location</b> | 10q11.22                                                                                                                         |
| <b>Pathway</b>             | ALK1 signaling events, organism-specific biosystem;                                                                              |

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**Function**

cytokine activity; growth factor activity; protein binding;

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