

# Active Recombinant Human Erythropoietin

**Cat. No.** EPO-269H    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Human EPO (P01588, 1 aa-193 aa) full-length recombinant protein expressed in Escherichia coli.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Source</b>           | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>ProteinLength</b>    | 1-193 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Description</b>      | Erythropoietin, or its alternatives erythropoetin or erithropoyetin or EPO, is a glycoprotein hormone that controls erythropoiesis, or red blood cell production. It is a cytokine for erythrocyte (red blood cell) precursors in the bone marrow. Also called hematopoietin or hemopoietin, it is produced by the peritubular capillary endothelial cells in the kidney and liver, it is the hormone that regulates red blood cell production. It also has other known biological functions. For example, erythropoietin plays an important role in the brain's response to neuronal injury. EPO is also involved in the wound healing process. When exogenous EPO is used as a performance-enhancing drug, it is classified as an erythropoiesis-stimulating agent (ESA). Exogenous EPO can often be detected in blood, due to slight difference from the endogenous protein, for example in features of posttranslational modification. |
| <b>Sequence</b>         | MGVHECPAWL WLLLSLLSLP LGLPVLGAPP RLICDSRVLE RYLLEAKEAE<br>NITTGCAEHC SLNENITVPD TKVNFYAWKR MEVGQQAVEV WQGLALLSEA<br>VLRGQALLVN SSQPWEPLQL HVDKAVSGLR SLTTLLRALG AQKEAISPPD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

|                                                |                                                                                                                                                                                                   |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AASAPLRTI TADTFRKLFR VYSNFLRGKL KLYTGEACRT GDR |                                                                                                                                                                                                   |
| <b>Theoretical MW (kDa)</b>                    | 20                                                                                                                                                                                                |
| <b>Form</b>                                    | Lyophilized                                                                                                                                                                                       |
| <b>Preparation Method</b>                      | Escherichia coli expression system                                                                                                                                                                |
| <b>Purification</b>                            | Ion exchange column and HPLC reverse phase column.                                                                                                                                                |
| <b>Purity</b>                                  | > 98% by SDS-PAGE and HPLC                                                                                                                                                                        |
| <b>Endotoxin Level</b>                         | < 0.1 ng/ug (1 EU/ug)                                                                                                                                                                             |
| <b>Activity</b>                                | Activity was determined by the dose-dependent proliferation assay using a factor-dependent human erythroleukemic cell line TF-1 and was found to be $3.8 \times 10^5$ IU/mg.                      |
| <b>Application</b>                             | SDS-PAGE                                                                                                                                                                                          |
| <b>Storage Buffer</b>                          | Lyophilized from PBS, pH 7.                                                                                                                                                                       |
| <b>Storage</b>                                 | Store at -20°C on dry atmosphere for 2 years. After reconstitution with deionized water, store at 4°C for 1 month or store at -20°C for 6 months. Aliquot to avoid repeated freezing and thawing. |
| <b>Unitprot ID</b>                             | P01588                                                                                                                                                                                            |

## GENE INFORMATION

**Gene Name** [EPO erythropoietin \[ Homo sapiens \]](#)

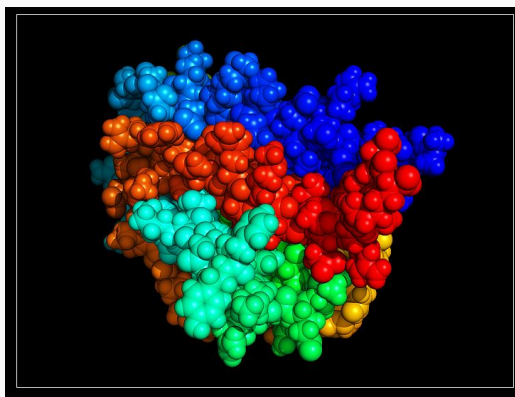
 Tel: 1-631-559-9269 1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

|                            |                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Official Symbol</b>     | EPO                                                                                                                                                                                                                                                                                                                                                      |
| <b>Synonyms</b>            | EP; MGC138142; Epoetin; Erythropoietin Precursor; EPO; erythropoietin; OTTHUMP00000201234; MVCD2                                                                                                                                                                                                                                                         |
| <b>Gene ID</b>             | 2056                                                                                                                                                                                                                                                                                                                                                     |
| <b>mRNA Refseq</b>         | NM_000799                                                                                                                                                                                                                                                                                                                                                |
| <b>Protein Refseq</b>      | NP_000790                                                                                                                                                                                                                                                                                                                                                |
| <b>MIM</b>                 | 133170                                                                                                                                                                                                                                                                                                                                                   |
| <b>Chromosome Location</b> | 7q22                                                                                                                                                                                                                                                                                                                                                     |
| <b>Pathway</b>             | Cytokine-cytokine receptor interaction; Hematopoietic cell lineage; Jak-STAT signaling pathway; Paxillin-independent events mediated by a4b1 and a4b7; Signaling events mediated by Stem cell factor receptor (c-Kit); HIF-2-alpha transcription factor network; HIF-1-alpha transcription factor network; EPO Receptor Signaling; EPO signaling pathway |
| <b>Function</b>            | erythropoietin receptor binding IEA ;hormone activity IEA ;protein binding; eukaryotic cell surface binding; protein kinase activator activity                                                                                                                                                                                                           |

Available structures



 Tel: 1-631-559-9269 1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA