

## Active Recombinant Human IL1B protein, R-PE labeled

**Cat. No.** IL1B-02HP    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant Human IL1B protein was expressed in Escherichia coli. Purified protein was labeled with R-PE in vitro.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>ProteinLength</b>    | 154 aa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Description</b>      | <p>The protein encoded by this gene is a member of the interleukin 1 cytokine family. This cytokine is produced by activated macrophages as a proprotein, which is proteolytically processed to its active form by caspase 1 (CASP1/ICE). This cytokine is an important mediator of the inflammatory response, and is involved in a variety of cellular activities, including cell proliferation, differentiation, and apoptosis. The induction of cyclooxygenase-2 (PTGS2/COX2) by this cytokine in the central nervous system (CNS) is found to contribute to inflammatory pain hypersensitivity. Similarly, IL-1B has been implicated in human osteoarthritis pathogenesis. Patients with severe Coronavirus Disease 2019 (COVID-19) present elevated levels of pro-inflammatory cytokines such as IL-1B in bronchial alveolar lavage fluid samples. The lung damage induced by the Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is to a large extent, a result of the inflammatory response promoted by cytokines such as IL-1B. This gene and eight other interleukin 1 family genes form a cytokine gene cluster on chromosome 2.</p> |

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| Form                  | Solution                                                                                                                                                                                                                                                                                        |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Bio-activity</b>   | Measured in a cell proliferation assay using D10.G4.1 mouse helper T cells. The ED50 for this effect is less or equal 12pg/ml.                                                                                                                                                                  |
| <b>Molecular Mass</b> | Approximately 17.3 kDa, a single non-glycosylated polypeptide chain containing 154 amino acids.                                                                                                                                                                                                 |
| <b>AA Sequence</b>    | MAPVRSLNCTL RDSQQKSLVM SGPYELKALH LQGQDMEQQV VFSMSFVQGE<br>ESNDKIPVAL GLKEKNLYLS CVLKDDKPTL QLESVDPKNY PKKKMEKRFB<br>FNKIEINNKL EFESAQFPNW YISTSQAENM PVFLGGTKGG QDITDFTMQF VSS                                                                                                                 |
| <b>Endotoxin</b>      | Less than 1 EU/g of rHuIL-1 $\beta$ as determined by LAL method.                                                                                                                                                                                                                                |
| <b>Purity</b>         | >95% by SDS-PAGE                                                                                                                                                                                                                                                                                |
| <b>Storage</b>        | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution. |
| <b>Concentration</b>  | 1.0 mg/ml                                                                                                                                                                                                                                                                                       |
| <b>Conjugation</b>    | R-PE                                                                                                                                                                                                                                                                                            |

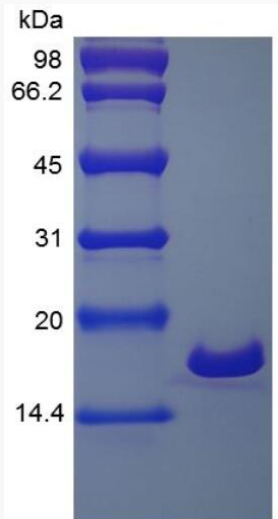
## GENE INFORMATION

|                        |                                                  |
|------------------------|--------------------------------------------------|
| <b>Gene Name</b>       | IL1B interleukin 1 beta [ Homo sapiens (human) ] |
| <b>Official Symbol</b> | IL1B                                             |

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| <b>Synonyms</b>       | IL-1; IL1F2; IL1beta; IL1-BETA                                                      |
| <b>Gene ID</b>        | 3553                                                                                |
| <b>mRNA Refseq</b>    | NM_000576.3                                                                         |
| <b>Protein Refseq</b> | NP_000567.1                                                                         |
| <b>MIM</b>            | 147720                                                                              |
| <b>UniProt ID</b>     | P01584                                                                              |
| <b>SDS-PAGE</b>       |  |