

# Active Recombinant Human IL1B Protein (Ala117-Ser269), GMP Grade, Animal-Free

Cat. No. IL1B-28HG Lot. No. (See product label)

## SPECIFICATION

**Product Overview** GMP recombinant human IL-1 beta/IL-1F2 protein (Ala117-Ser269) without tag was expressed in E. coli, produced in an Animal-Free laboratory and manufactured and tested under cGMP guidelines.

**Species** Human

**Source** E.coli

**ProteinLength** Ala117-Ser269

**Description** 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

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|                                     |  |
|-------------------------------------|--|
|                                     | cluster on chromosome 2.   |
| <b>Bio-activity</b>                 | <p>Measured in a cell proliferation assay using D10.G4.1 mouse helper T cells. The ED50 for this effect is &lt;12 pg/mL.</p> <p>The specific activity of recombinant human IL-1 beta is &gt;5.0 x 10<sup>7</sup> IU/mg, which is calibrated against the human IL-1 beta WHO International Standard.</p>  |
| <b>Molecular Mass</b>               | Predicted Molecular Mass: 17 kDa   |
| <b>N-terminal Sequence Analysis</b> | <p>Ala-Pro-Val-Arg-Ser-Leu-Asn-(Cys)-Thr-Leu</p> <p>Pro-Val-Arg-Ser-Leu-Asn-(Cys)-Thr-Leu-Arg</p>  |
| <b>Endotoxin</b>                    | <0.01 EU/ µg of the protein by the LAL method.   |
| <b>Purity</b>                       | >97%, by SDS-PAGE with silver staining, under reducing conditions.   |
| <b>Storage</b>                      | <p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <p>A minimum of 12 months when stored at ≤ -20 centigrade as supplied. Refer to lot specific COA for the Use by Date.</p> <p>1 month, 2 to 8 centigrade under sterile conditions after reconstitution.</p> <p>3 months, ≤ -20 centigrade under sterile conditions after reconstitution.</p> |
| <b>Storage Buffer</b>               | Lyophilized from a 0.2 µm filtered solution in PBS.  |
| <b>Reconstitution</b>               | Reconstitute at 100-200 µg/mL in PBS.  |
| <b>Shipping</b>                     | The product is shipped with polar packs.   |

## GENE INFORMATION

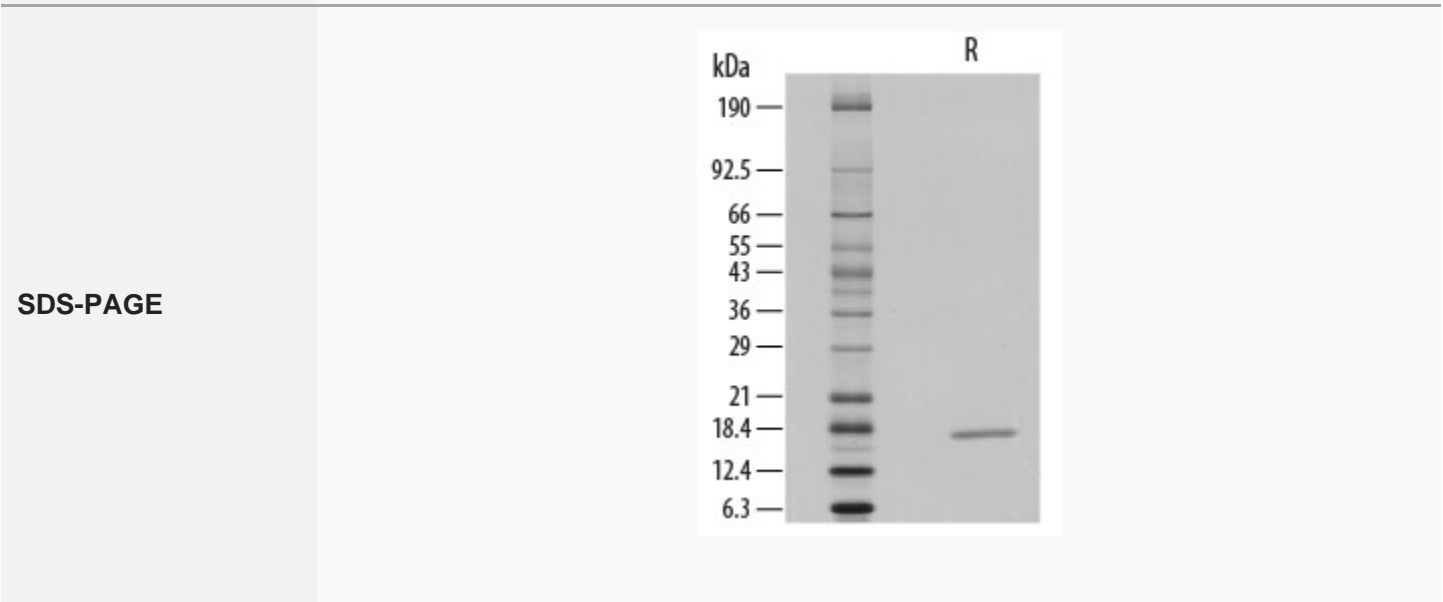
**Gene Name** [IL1B interleukin 1, beta \[ Homo sapiens \]](#)

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|                        |   |
|------------------------|---|
| <b>Official Symbol</b> | IL1B  |
| <b>Synonyms</b>        | IL1B; interleukin 1, beta; interleukin-1 beta; IL 1B; IL1 BETA; IL1F2; IL-1 beta; catabolin; preinterleukin 1 beta; pro-interleukin-1-beta; IL-1; IL1-BETA; |
| <b>Gene ID</b>         | 3553  |
| <b>mRNA Refseq</b>     | NM_000576   |
| <b>Protein Refseq</b>  | NP_000567   |
| <b>MIM</b>             | 147720  |
| <b>UniProt ID</b>      | P01584  |

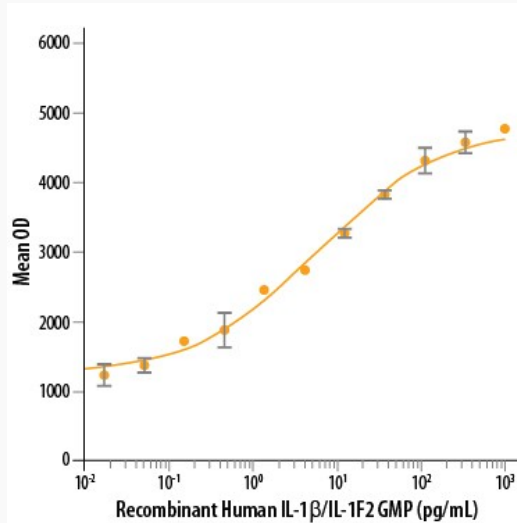


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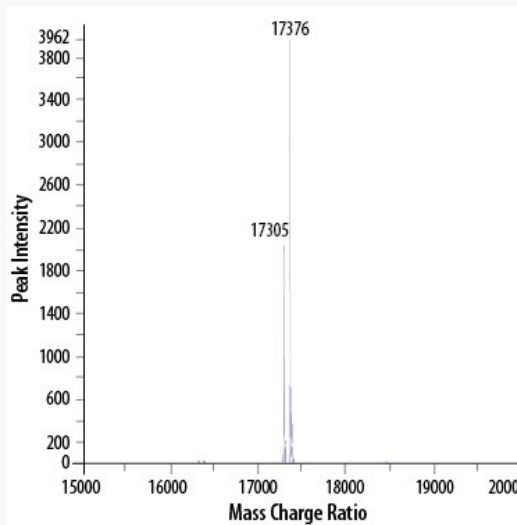
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**Bioactivity**



**Mass Spectrometry**



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