

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

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

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

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	cluster on chromosome 2.
Bio-activity	Measured in a cell proliferation assay using D10.G4.1 mouse helper T cells. The ED50 for this effect is <12 pg/mL. The specific activity of recombinant human IL-1 beta is >5.0 x 10⁷ IU/mg, which is calibrated against the human IL-1 beta WHO International Standard.
Molecular Mass	Predicted Molecular Mass: 17 kDa
N-terminal Sequence Analysis	Ala-Pro-Val-Arg-Ser-Leu-Asn-(Cys)-Thr-Leu Pro-Val-Arg-Ser-Leu-Asn-(Cys)-Thr-Leu-Arg
Endotoxin	<0.01 EU/ µg of the protein by the LAL method.
Purity	>97%, by SDS-PAGE with silver staining, under reducing conditions.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. A minimum of 12 months when stored at ≤ -20 centigrade as supplied. Refer to lot specific COA for the Use by Date. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, ≤ -20 centigrade under sterile conditions after reconstitution.
Storage Buffer	Lyophilized from a 0.2 µm filtered solution in PBS.
Reconstitution	Reconstitute at 100-200 µg/mL in PBS.
Shipping	The product is shipped with polar packs.

GENE INFORMATION

Gene Name	IL1B interleukin 1, beta [Homo sapiens]
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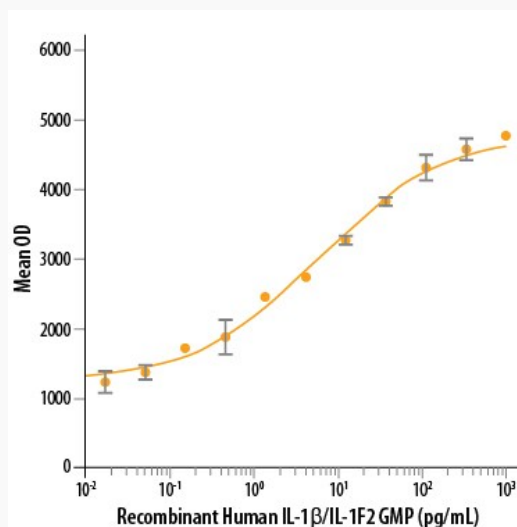
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Official Symbol	IL1B
Synonyms	IL1B; interleukin 1, beta; interleukin-1 beta; IL 1B; IL1 BETA; IL1F2; IL-1 beta; catabolin; preinterleukin 1 beta; pro-interleukin-1-beta; IL-1; IL1-BETA;
Gene ID	3553
mRNA Refseq	NM_000576
Protein Refseq	NP_000567
MIM	147720
UniProt ID	P01584

Bioactivity

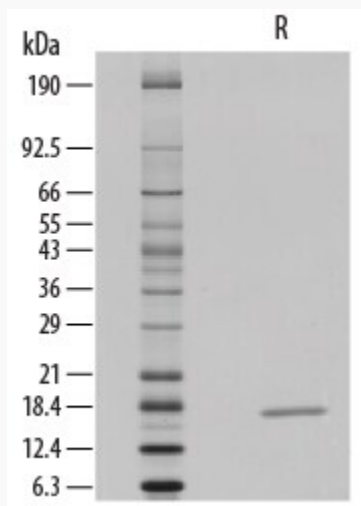


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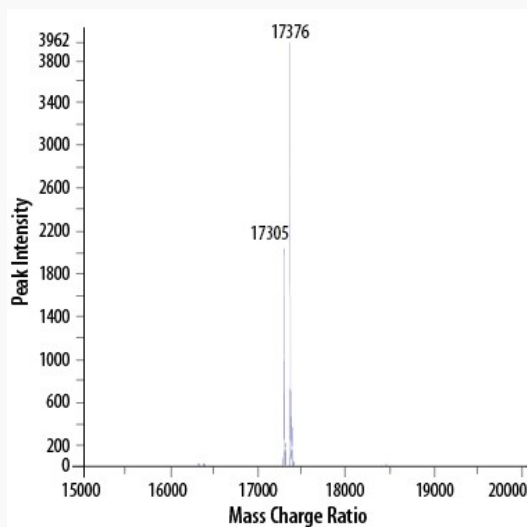
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SDS-PAGE



Mass Spectrometry



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