PRODUCT INFORMATION

Interleukin-1β (human, recombinant)

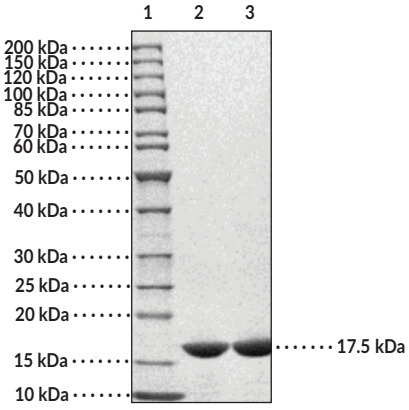
Item No. 46538

Overview and Properties

Synonyms: Catabolin, IL1-F2
Source: Recombinant human IL-1β expressed in *E. coli*
Amino Acids: 117-269
Uniprot No.: P01584
Molecular Weight: 175.5 kDa
Storage: -80°C (as supplied)
Stability: ≥1 year
Purity: ≥90% estimated by SDS-PAGE
Supplied in: 50 mM Tris-HCl, pH 7.5, with 200 mM sodium chloride, 20% glycerol, and 1 mM DTT
Endotoxin Testing: <1.0 EU/µg, determined by the LAL endotoxin assay
Bioactivity: See figure for details

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: IL-1β (2 µg, reduced)
Lane 3: IL-1β (2 µg, non-reduced)

SDS-PAGE Analysis of IL-1β. This protein has a calculated molecular weight of 17.5 kDa.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Interleukin-1β (IL-1β) is a cytokine and member of the IL-1 family of proteins.[1] It is produced as an inactive cytosolic pro-cytokine, which is cleaved by caspase-1 into mature IL-1β.[2] IL-1β is found primarily in mononuclear cells where it can be secreted by immune cells during pyroptosis *via* the NOD-like receptor protein 3 (NLRP3) inflammasome pathway following its activation by bacterial and viral pathogens.[3,4] IL-1β binds to IL-1 receptor 1 (IL-1R1), which is expressed in a variety of cells, including T cells, fibroblasts, and keratinocytes, and IL-1R2, which is expressed primarily in B cells and neutrophils with IL-1R3 as a co-receptor.[2,5] Upon binding to its receptors, IL-1β induces kinase signaling cascades leading to the induction of NF-κB transcriptional activity and modulation of immune and inflammatory responses.[1,2,6] IL-1β activity can be inhibited by the endogenous protein IL-1R antagonist (IL-1Ra), which inhibits IL-1β binding by preventing IL-1R1 interaction with its co-receptor IL-1R3.[2]

References

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