

Recombinant human IL-1 β protein (Qk101)



Type: Stem cells

Available for purchase: Unit Size (µg): 25, 50, 100, 500, 1000

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Product Information

Interleukin-1 beta (IL-1 β) is a pro-inflammatory cytokine and a potent mediator of inflammation and immune responses. It promotes the activation and recruitment of immune cells to sites of infection or injury, such as antigen presenting cells, macrophages, and T lymphocytes. In cell culture, recombinant IL-1 β is used to stimulate and activate immune cells (macrophages and T cells), maintain hematopoietic progenitor cells, and modulate the differentiation of mesenchymal stem cells.

Qkine human IL-1 β is a monomer of a molecular weight of 17.3 kDa. This protein is [animal origin-free](#), carrier protein-free, and tag-free to ensure a homogenous population with exceptional lot-to-lot consistency. IL-1 β is suitable for reproducible, high-quality [hematopoietic stem cells](#) and more specific lineages.

This protein is also available as GMP compliant [Cell Therapy Grade](#), to enquire email support@qkine.com.

Alternative protein names

Catabolin, IL-1b, IL 1b, IL-1beta, ILbeta, IL1b, IL1, IL1b

Molecular weight

17.3 kDa (monomer)

Protein Uniprot number

Highly pure human protein (UniProt number: P01584)

Species reactivity

- human
- species similarity:
- mouse - 78%
- rat - 77%
- bovine - 67%
- porcine - 66%

Product Information

- >98%, by SDS-PAGE quantitative densitometry
- Expressed in *E. coli*
- Animal origin-free (AOF) and carrier protein-free
- Manufactured in our Cambridge, UK laboratories
- Lyophilized from HEPES, NaCl, Cys

Reconstitution instructions

- Resuspend in sterile-filtered water at >50 µg/ml

Featured applications

- Maintenance and differentiation of hematopoietic stem cells
- Directed osteogenic differentiation of mesenchymal stem cells
- Neural stem cell proliferation and neuronal differentiation
- Activation of M2 macrophages
- Activation of Th17 cells

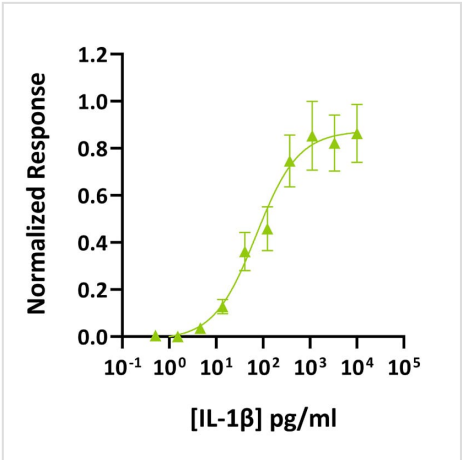
Further quality assays

- Mass spectrometry: single species with expected mass
- Recovery from stock vial: >95%
- Endotoxin: <0.05 EU/µg protein

Scientific Information

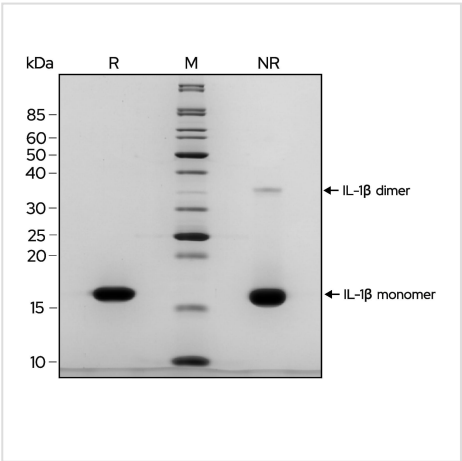
Bioactivity

IL-1 β activity was determined using the IL-1 β -responsive firefly luciferase reporter assay. Transfected HEK293T cells were treated in triplicate with a serial dilution of IL-1 β for 3 hours. Firefly luciferase activity was measured and normalised to the control Renilla luciferase activity. Data from Qk101 lot #204587. EC50 = 71 pg/ml (4 pM).



Purity

Recombinant IL-1 β migrates as a major band at 17.4 kDa in non-reducing (NR) conditions. The higher molecular weight minor band is the dimeric form. Upon reduction (R), only the 17.4 kDa band is visible. No contaminating protein bands are present. Purified recombinant protein (3 μ g) was resolved using 15% w/v SDS-PAGE in reduced (+ β -mercaptoethanol, R) and non-reduced (NR) conditions and stained with Coomassie Brilliant Blue R250. Data from Qk101 batch #204587.



Original product page: <https://qkine.com/product/recombinant-human-il-1b-protein-qk101/>

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