

Interleukin-1 Beta (IL-1 Beta), Human



Cat. No. SR102-1000G

Size: 1 mg

Cat. No. SR102-0100G

Size: 100 µg

Description

Interleukin-1 Beta (IL-1 Beta) is produced by activated macrophages, IL-1 Beta stimulates thymocyte proliferation by inducing il-2 release, b-cell maturation and proliferation, and fibroblast growth factor activity. IL-1 Beta proteins are involved in the inflammatory response, being identified as endogenous pyrogens, and are reported to stimulate the release of prostaglandin from synovial cells.

Expression System

Escherichia coli

Sequence

MASAPVRLNCTLRDSQQKSLVMSGPYELKALHLQGGDMEQQVVFMSFVQG
EESNDKIPVALGLKEKNLYLSCVLKDDKPTLQLESVDPKNYPKKMEKRFVFNKI
EINNKLFEFSAQFPNWWYISTSQAENMPVFLGGTKGGQDITDFTMQFVSS
with polyhistidine tag at the C-terminus.

Species Human

Tag polyhistidine tag at the C-terminus

Endotoxin Level

<0.1 EU per 1 µg of the protein by the LAL method.

Activity

Measure by its ability to induce proliferation in D10.G4.1 cells.

The ED₅₀ for this effect is <10 µg/mL.

The specific activity of recombinant human IL-1 beta is approximately >1.5 x 10⁸ IU/mg.

Measure by its ability to induce IL-8 secretion in HT29 cells.

The ED₅₀ for this effect is 1.8-5.1 ng/mL.

Purity >98% as determined by SDS-PAGE. Ni-NTA chromatography

Formulation

The protein was lyophilized from a solution containing 1X PBS, pH 8.0.

Reconstitution

Unopened ampoules can be stored at -20°C or -80°C.

Need not spin the ampoule. Open the cap carefully, then dissolve the lyophilized protein with sterile water for a 100 µg/mL concentration or according to the product's Certificate of Analysis (CoA). Rinse the inner side of the ampoule gently and stand for at least 20 minutes at room temperature. (Important Note: Do Not Vortex!) Use the reconstituted solution immediately or store it by distributing it to aliquots and store at -20 °C. (Avoid repeated freeze-thaw cycles) We recommend diluting the solution to working concentration by using buffers or medium containing a carrier*. (Do not dilute the working solution with water, which may cause protein degradation.)

*Carriers: 0.1% BSA or 5% HSA or 10% FBS.

Storage

Lyophilized protein should be stored at -20°C.

This product is stable for one year upon receipt, when handled and stored as instructed.

Upon reconstitution, protein aliquots should be stored at -20°C or -80°C.

Avoid repeated freeze/thaw cycles.

Note

Please use within one month after protein reconstitution.

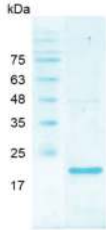
Specification

The recombinant proteins are manufactured in ISO 13485:2016 and GMP-certified facility. The processes include:

- Testing and traceability of raw material
- Records of the maintenance and equipment calibration
- Personnel training records
- Batch-to-batch consistency
- Documentation of QA control and process changes
- Manufactured and tested under an ISO 13485:2016 certified quality management system
- Stability monitors of product shelf-life

Reference

1. Yazdi AS, Ghoreschi K. (2016) Adv Exp Med Biol. 941: 21-29.
2. Gabay C. et al. (2010) Nat Rev Rheumatol. 6,4: 232-41.
3. Lopez-Castejon G, Brough D. (2011) Cytokine Growth Factor Rev. 22,4: 189-95
4. Weber A. et al. (2010) Sci Signal. 3,105: cm².



SDS-PAGE analysis of recombinant human IL-1 Beta

Related Ordering Information

Cat. No.	Description	Size
CC103-0500	DMEM, High Glucose	500 ml
CC109-0500	RPMI 1640	500 ml
CC113-0500	DMEM/F-12	500 ml
PC203-0600	60mm Tissue Culture Dish, with Gripping Ring	600 ea
PC273-0100	75T Flask, Plug Seal Cap	100 ea

Caution

- During operation, always wear a lab coat, disposable gloves, and protective equipment.
- Research Use Only. Not intended for any animal or human therapeutic or diagnostic uses.