

Recombinant human IL-1 β

E. coli expressed human interleukin-1beta with HSA

Catalog # rcyec-hil1b

For research use only, not for diagnostic or therapeutic use

Version # 16A08-MM

PRODUCT INFORMATION

Content:

- 10 μ g of recombinant human IL-1 β provided as a white lyophilized powder

Note: Recombinant human IL-1 β is sterile filtered prior to lyophilization.

- 1.5 ml endotoxin-free water

Storage and stability:

- Recombinant human IL-1 β is shipped at room temperature. Upon receipt it should be stored at -20 $^{\circ}$ C.

- Upon resuspension, prepare aliquots of recombinant human IL-1 β and store at 4 $^{\circ}$ C for 1 week or at -20 $^{\circ}$ C to -80 $^{\circ}$ C for 12 months.

Note: Avoid repeated freeze-thaw cycles.

Quality control:

- Purity greater than 95% as determined by SDS-PAGE

- Endotoxin: Less than 0.1 EU/ μ g of IL-1 β as determined by the LAL method.

- The biological activity has been confirmed using HEK-Blue[™] IL-1 β cells (see validation data sheet available on our website).

DESCRIPTION

IL-1 β is a secreted pro-inflammatory cytokine that participates in the generation of systemic and local responses to infection and injury^{1,2}. IL-1 β derives from a proprotein that is produced by activated macrophages and cleaved by caspase 1³. The resulting mature IL-1 β is secreted and binds to the IL-1RI receptor inducing MyD88-mediated intracellular signaling leading to the activation of the transcription factor NK- κ B and the subsequent production of inflammatory cytokines, such as IL-6 and IL-8⁴.

Recombinant human interleukin-1 beta (IL-1 β) is intended for use in cell culture applications. Recombinant human IL-1 β is produced in *Escherichia coli*.

1. Dinarello C., 2009. Immunological and inflammatory functions of the interleukin-1 family. Annu. Rev. Immunol. 27:519-550. 2. Sims J. & Smith D., 2010. The IL-1 family: regulators of immunity. Nat Rev Immunol. 10(2):89-102. 3. O'Neill L., 2008. The interleukin-1 receptor/Toll-like receptor superfamily: 10 years of progress. Immunol. Rev. 226, 10-18. 4. Weber A. et al., 2010. Interleukin-1 (IL-1) pathway. Sci Signal. 3(105):cm1.

CHARACTERISTICS

Source: Ala117-Ser269 expressed in *E. coli*

Accession number: NP_000567

Molecular mass: \approx 17.3 kDa

Formulation: Recombinant human IL-1 β was lyophilized from a 0.2 μ m filtered phosphate buffer solution (pH 7.4) containing human serum albumin (HSA) as a carrier protein.

Solubility: 100 μ g/ml in water

METHOD

Preparation of stock solution (100 μ g/ml)

1. Add 100 μ l endotoxin-free water (provided) to 10 μ g of recombinant human IL-1 β .
2. Mix by pipetting. Do not vortex.
3. Prepare aliquots of recombinant human IL-1 β and store at 4 $^{\circ}$ C for 1 week or at -20 $^{\circ}$ C to -80 $^{\circ}$ C for 12 months. Avoid freeze-thaw cycles.
4. Further dilutions can be prepared in the appropriate aqueous buffer, such as cell culture medium containing serum.

RELATED PRODUCTS

Product	Catalog Code
Anti-hIL-1 β -IgG	mabg-hil1b-3
HEK-Blue [™] IL-1 β Cells	hkb-il1b

TECHNICAL SUPPORT

InvivoGen USA (Toll-Free): 888-457-5873

InvivoGen USA (International): +1 (858) 457-5873

InvivoGen Europe: +33 (0) 5-62-71-69-39

InvivoGen Hong Kong: +852 3-622-34-80

E-mail: info@invivogen.com