

## Interleukin-1 beta

### Human, Recombinant (rHuIL-1 $\beta$ )

Expressed in *E. coli*

Cat. No. CRP0885

Lot. No. (See product label)

#### PRODUCT INFORMATION

**Description:** IL-1 beta is a proinflammatory cytokine produced in a variety of cells including monocytes, tissue macrophages, keratinocytes and other epithelial cells. Both IL-1 alpha and IL-1 beta binds to the same receptor and has similar if not identical biological properties. These cytokines have a broad range of activities including, stimulation of thymocyte proliferation, by inducing IL-2 release, B-cell maturation and proliferation, mitogenic FGF-like activity and the ability to stimulate the release of prostaglandin and collagenase from synovial cells. However, whereas IL-1 beta is a secreted cytokine, IL-1 alpha is predominantly a cell-associated cytokine.

**Amino-Acid Sequence:** 153aa. non-glycosylated

**M. W. :** approximately 17.3kDa

**Recombinant:** Expressed in *E. coli*

**Purity:** >98% by SDS-PAGE and HPLC analyses.

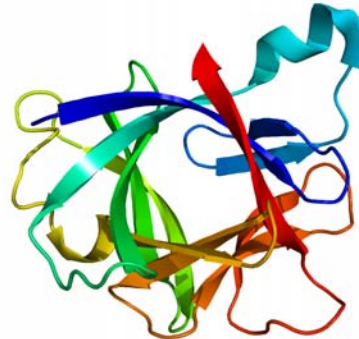
**Formulation:** Lyophilized from a 0.2mm filtered concentrated (1.0mg/ml) solution in PBS, pH 7.5.

**Endotoxin:** Less than 1EU/mg of rHuIL-1 $\beta$  as determined by LAL method.

**Reconstitution:** We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at  $\leq -20^{\circ}\text{C}$ . Further dilutions should be made in appropriate buffered solutions.

**Storage:** This lyophilized preparation is stable at 2-8 $^{\circ}\text{C}$ , but should be kept at -20 $^{\circ}\text{C}$  for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 $^{\circ}\text{C}$ . For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 $^{\circ}\text{C}$  to -70 $^{\circ}\text{C}$ . Avoid repeated freeze/thaw cycles.

#### FOR RESEARCH USE ONLY



Crystal structure of IL-1b ([PDB 31BI](#)).

#### GENE INFORMATION

**Gene Name:** [IL1B](#)

**Synonyms:** IL-1; IL1F2; IL1-BETA; Catabolin;IL-1B;pro-interleukin-1-beta; Interleukin-1 beta precursor; interleukin 1, beta; preinterleukin 1 beta; IL1B\_HUMAN.

**mRNA Refseq:** [NM\\_000576](#)

**Protein Refseq:** [NP\\_000567](#)

**MIM:** [147720](#)

**UniProt ID:** P01584

**GeneID:** [3553](#)

**Chromosome Location:** 2q14

**Pathway:** Alzheimer's disease; Apoptosis; Cytokine-cytokine receptor interaction; Hematopoietic cell lineage; MAPK signaling pathway; Toll-like receptor signaling pathway; Type I diabetes mellitus

**Function:** interleukin-1 receptor binding;protein binding;signal transducer activity

#### REFERENCES

- 1.Griffin WS, Mrak RE (2002). Interleukin-1 in the genesis and progression of and risk for development of neuronal degeneration in Alzheimer's disease. *J. Leukoc. Biol.* **72** (2): 233–8.
- 2.Arend WP (2003). The balance between IL-1 and IL-1Ra in disease. *Cytokine Growth Factor Rev.* **13** (4-5): 323–40.
- 3.Chakravorty M, Ghosh A, Choudhury A, et al. (2004). Ethnic differences in allele distribution for the IL8 and IL1B genes in populations from eastern India. *Hum. Biol.* **76** (1): 153–9.