Recombinant Mouse Interleukin-1 Beta (IL-1β)

(Cat. No.: C042)

Background:

IL-1 is a name that designates two proteins, IL-1α and IL-1β, that are the products of distinct genes, but recognize the same cell surface receptors. IL-1α and IL-1β are structurally related polypeptides that show apprximately 25% homology at the amino acid level. Both proteins are produced by a wide variety of cells in response to stimuli such as those produced by inflammatory agents, infections, or microbial endotoxins. The proteins are synthesized as 31 kDa precursors that are subsequently cleaved into proteins with molecular weights of approximately 17.5 kDa. The specific protease responsible for the processing of IL-1β, designated interleukin 1β-converting enzyme (ICE), has been described. Mature human and mouse IL-1β share approximately 75% amino acid sequence identity and human IL-1 β has been found to be active on murine cell lines.

Description:

Recombinant Mouse IL-1 beta produced in *E. coli* is a non-glycosylated polypeptide chain containing 152 amino acids and having a molecular mass of 17400 Dalton.

Quality Control:

Biological activity: The ED50 as determined by the dose-dependant stimulation of mouse D10S cells was found to be less than 0.01 ng/ml, corresponding to a Specific Activity of 1.0×10^8 IU/mg.

Purity: Greater than 98% as determined by

(a) Analysis by RP-HPLC.

(b) Anion-exchange FPLC.

(c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel..

Amino-Acid Sequence: The sequence of the first five N-terminal amino acids was determined and was found to be Val-Pro-Ile-Arg-Gln.

Endotoxin: Less than 0.1ng/μg (1IEU/μg) of IL-1β.

Formulation: Mouse IL-1β was lyophilized after extensive dialysis against PBS.

Storage: Lyophilized rmIL-1β although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rmIL-1β should be stored at 4°C between 2-7 days and for future use below -18°C. For long-term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Please avoid freeze-thaw cycles.

Reconstitution: It is recommended to reconstitute the lyophilized rmIL-1β in sterile 18MΩ-cm H_2O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.