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Human IL-1 β Recombinant Protein

10 μ g**Orders:** 877-616-CELL (2355)
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For Research Use Only. Not for Use in Diagnostic Procedures.**MW (kDa):**
17.5**UniProt ID:**
#P01584**Entrez-Gene Id:**
3553

Background

Interleukin-1 β (IL-1 β) is a pro-inflammatory cytokine produced predominantly by activated monocytes and epithelial cells (1). Precursor IL-1 β is cleaved by caspase-1 and mature IL-1 β is then secreted (1-3). Target cells include macrophages and many other cell types. Signaling by IL-1 β involves IL-1 β binding to IL-1 accessory protein (IL-1-AcP) and then the complex binds to IL-1RI (1,2). Signaling is through activation of MAP kinase and NF- κ B pathways (1,2). IL-1 β also binds to IL-1RII that lacks an intracellular signaling domain and thereby serves as a high affinity decoy receptor. IL-1 β binding to IL-1RI is inhibited by the negative regulator, IL-1 receptor antagonist (IL-1RA). IL-1RA binding to IL-1RI does not signal and serves to block IL-1 β signaling. IL-1 β plays critical roles in the acute phase response and sepsis (1-3).

Endotoxin

Endotoxin levels are less than or equal to 1 EU / 1 μ g hIL-1 β .

Purity

A greater than or equal to 95% purity was determined by SDS-PAGE.

Source / Purification

Recombinant human IL-1 β was expressed in *E. coli* and is supplied in a lyophilized form.

Bioactivity

The bioactivity of recombinant hIL-1 β was determined in a D10S cell proliferation assay. The ED₅₀ of each lot is less than or equal to 12 pg/mL.

Background References

1. Dinarello, C.A. (1996) *Blood* 87, 2095-147.
2. Allan, S.M. et al. (2005) *Nat Rev Immunol* 5, 629-40.
3. Kramer, F. et al. (2008) *Mol Immunol* 45, 2678-89.

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