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#62643**Human IL-1 α Recombinant Protein**10 μ g
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MW (kDa):
18

UniProt ID:
#P01583

Entrez-Gene Id:
3552
Background

Interleukin 1 alpha (IL-1 α) belongs to the IL-1 family of cytokines with 11 members including IL-1 β . IL-1 α is expressed in many cell types of both hematopoietic and non-hematopoietic origins under steady state, and its expression can be increased in response to appropriate stimuli (1,2). Like IL-1 β , IL-1 α is also synthesized as a precursor (pro-IL-1 α) and can be cleaved into smaller mature forms. However, both pro-IL-1 α and the cleaved form of IL-1 α are biologically active and can activate the signaling pathway through the membrane receptor IL-1R1. IL-1 α is active both as a secreted form and as a membrane-bound form. Due to such characteristics, passive leakage of IL-1 α from dying cells can activate inflammation, leading some researchers to consider IL-1 α as a key "alarmin in the cell" that alerts the host to damage or injury (3,4). In addition, IL-1 α can also enter the nucleus to modulate transcription (5,6).

Endotoxin

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

Purity

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

Source / Purification

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

Bioactivity

The bioactivity of recombinant hIL-1 α was determined in a D10S cell proliferation assay. The ED₅₀ of each lot is less than or equal to 50 pg/ml.

Background References

1. Garlanda, C. et al. (2013) *Immunity* 39, 1003-18.
2. Palomo, J. et al. (2015) *Cytokine* 76, 25-37.
3. Bertheloot, D. and Latz, E. (2017) *Cell Mol Immunol* 14, 43-64.
4. Di Paolo, N.C. and Shayakhmetov, D.M. (2016) *Nat Immunol* 17, 906-13.
5. Lamacchia, C. et al. (2013) *Cytokine* 63, 135-44.
6. Rider, P. et al. (2013) *Semin Immunol* 25, 430-8.

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