

General Information

Synonyms	IL1 alpha; IL-1 alpha; IL1; IL1A; IL-1A; IL1-ALPHA; IL1F1; IL-1F1; IL1F1hematopoietin-1
Accession #	P01582
Source	Human embryonic kidney cell, HEK293-derived mouse IL-1a protein
	Ser113-Ala271
Predicted Molecular weight	18.0 kDa

Components and Storage

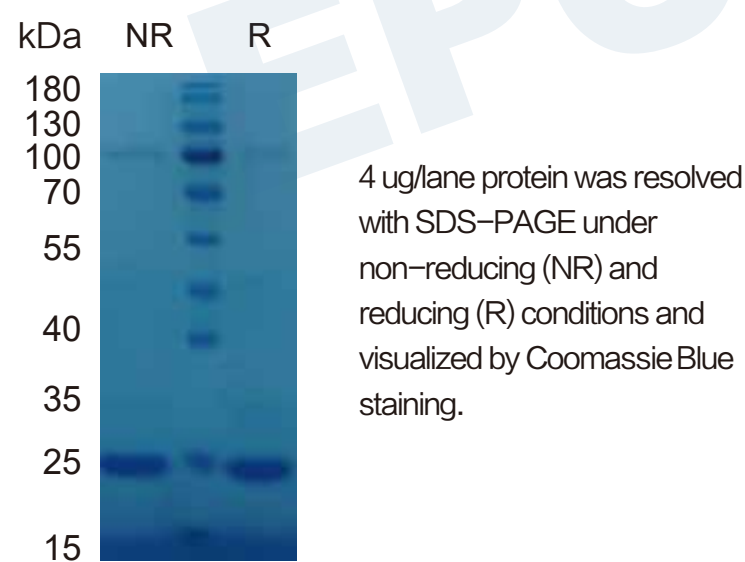
Formulation	Solution protein. Dissolved in sterile PBS buffer . This solution can be diluted into other aqueous buffers. Centrifuge the vial prior to opening.
Storage and Stability	Avoid repeated freeze-thaw cycles. It is recommended that the protein be aliquoted for optimal storage. 12 months from date of receipt, -20 to -70 ° C as supplied.

Shipping Shipping with dry ice

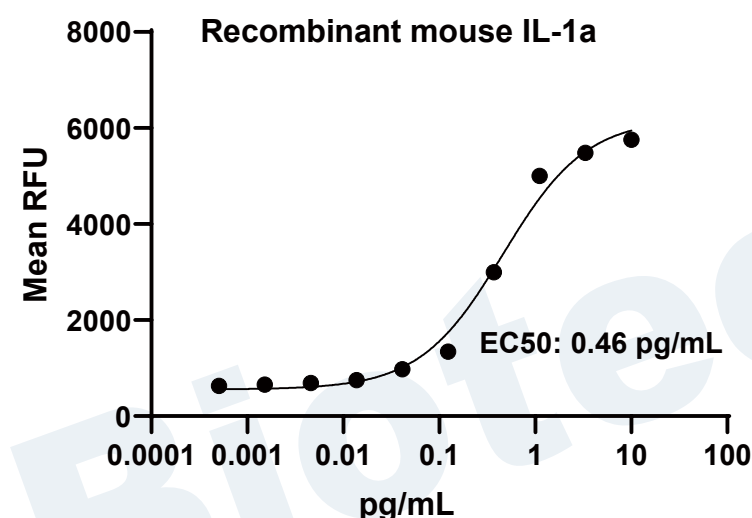
Quality

Purity	> 95%, determined by SDS-PAGE
Endotoxin Level	<0.010 EU per 1 ug of the protein by the LAL method
Activity	Measured in a cell proliferation assay using D10.G4.1 mouse helper T cells. The EC50 for this effect is 0.1-2 pg/mL.

SDS-PAGE



Bioactivity



Recombinant mouse IL-1a (Catalog # MF-1001A) stimulates cell proliferation of the D10.G4.1 mouse helper T cells.

Background

IL-1 alpha is a member of the interleukin 1 cytokine family. Cytokines are proteinaceous signaling compounds that are major mediators of the immune response. They control many different cellular functions including proliferation, differentiation, and cell survival/apoptosis but are also involved in several pathophysiological processes including viral infections and autoimmune diseases. Cytokines are synthesized under various stimuli by a variety of cells of both the innate (monocytes, macrophages, dendritic cells) and adaptive (T- and B-cells) immune systems. Cytokines can be classified into two groups: pro- and anti-inflammatory. Pro-inflammatory cytokines, including IFNgamma, IL-1, IL-6, and TNF-alpha, are predominantly derived from the innate immune cells and Th1 cells. Anti-inflammatory cytokines, including IL-10, IL-4, IL-13, and IL-5, are synthesized from Th2 immune cells. IL-1 alpha is a pleiotropic cytokine involved in various immune responses, inflammatory processes, and hematopoiesis. It is produced by monocytes and macrophages as a proprotein, which is proteolytically processed and released in response to cell injury, and thus induces apoptosis. IL-1 alpha stimulates thymocyte proliferation by inducing IL-2 release, B-cell maturation and proliferation, and fibroblast growth factor activity.

Reference

- Nicklin MJ, et al. (1994) Genomics. 19(2):382-4.
- March CJ, et al. (1985) Nature. 315(6021):641-7.
- Bankers-Fulbright JL, et al. (1996) Life Sci. 59(2):61-83.
- Dinarelli CA, et al. (1997) Semin Oncol. 24 (3 Suppl 9):S9-81-S9-93.

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