

Recombinant Human Interleukin 1, Alpha, Fc Chimera

Cat. No. IL1A-109H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Human interleukin 1, alpha encoding the signal peptide and extracellular domain of human IL-1 Receptor I (IL-1RI) (aa 1-333) , was expressed in modified *human 293 cells*. It was fused to the Fc region of human IgG1 (aa 93-330).

Species Human

Source HEK293

ProteinLength 1-333 a.a.

Description Interleukin 1, alpha Fc Chimera is an 80kDa type I transmembrane glycoprotein expressed on T cells and fibroblasts. Structurally the extracellular domain (ECD) of IL-1R1 contains 3 Immunoglobulin like domains. Glycosylation of IL-1R1 has been shown to be necessary for optimal binding of IL-1, as blocking of glycosylation sites reduces binding to IL-1.

Amino Acid Sequence
 LEADKCK EREEKIIL VS SANEIDVR PCP LNPNEHK GTITWYK DDSKTP VSTEQA
 SRIHQ HKEKLWF VPAKVED SGHYY CVVR NSSY CLRIK ISAK FVE NEP NL CY
 NAQAIFKQK LPVAGDGLVC PYMEFFK NENN EL PK LQ W YK DCKPLLLDNI
 HFSG VKDRLIVM NVAEKH RGNYTCH ASYTYLG KQYPITRVIE FIT LEE NKPT
 RPVIVSP ANETMEVDLG SIIQLICNVTGQL SDIAYWKWNGSVIDE DDPVLGE
 DYYSVE NPANKR RSTLI TVLNIS EIESRFYK HPFTCFAKN THGIDAAYIQ
 LIYPVTNRSS NTKV DKK VEPKS CDKTH TCPPCP AP ELLGGPSV FL FPP KPK
 DTLMISRTPEVTCVVVDVSHEDPE VKFNWY VDGVEV HNAKTK PREEQY NSTY

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RVVSVL TVLHQD WLNGK EYKCR VSNKALP APIEKTISKAKGQ PREPQ YTL
 PPSRDE LTKNQVSLTCL VKGFYPSDIAV EWESNGQPEN NYKTTTPVLDSG GSF
 FLYSKL TVDKS RWQQGNV FSCSVM HEALTH NHYTQKSLSLSPGK.

Molecular Mass

Interleukin 1, alpha Fc Chimera migrates as a broad band between 65 and 100 kDa in SDS-PAGE due to post-translation modifications, in particular glycosylation. This compares with unmodified IL-1RI-Fc that has a predicted molecular mass of 63.6 kDa.

pI

Interleukin 1, alpha Fc Chimera separates into a number of isoforms with a pI between 5 and 8 in 2D PAGE due to post-translational modifications, in particular glycosylation. This compares with the unmodified IL-1RI-Fc that has a predicted pI of 7.

% Carbohydrate

Purified Interleukin 1, alpha Fc Chimera consists of 0-36% carbohydrate by weight.

Glycosylation

Interleukin 1, alpha Fc Chimera has N-linked and may have O-linked oligosaccharides.

Purity

>95%, as determined by SDS-PAGE and visualized by silver stain.

Formulation

When reconstituted in 0.5 ml sterile phosphate-buffered saline, the solution will contain 1% human serum albumin (HSA) and 10% trehalose.

Reconstitution

It is recommended that 0.5 ml of sterile phosphate-buffered saline be added to the vial.

Storage

Lyophilized products should be stored at 2 to 8°C. Following reconstitution short-term storage at 4°C is recommended, and longer-term storage of aliquots at -18 to -20°C. Repeated freeze thawing is not recommended.

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GENE INFORMATION

Gene Name	IL1A interleukin 1, alpha [Homo sapiens]
Synonyms	IL1A; interleukin 1, alpha; IL1; IL-1A; IL1F1; IL1-ALPHA; preinterleukin 1 alpha; hematopoietin-1; pro-interleukin-1-alpha; Interleukin-1 alpha;IL-1 alpha; Hematopoietin-1; IL1A (IL1F1)
Gene ID	3552
mRNA Refseq	NM_000573
Protein Refseq	NP_000566
MIM	147760
UniProt ID	P01583
Chromosome Location	2q14
Pathway	Apoptosis; Cytokine-cytokine receptor interaction; Graft-versus-host disease; Hematopoietic cell lineage; MAPK signaling pathway; Prion diseases; Type I diabetes mellitus
Function	cytokine activity; interleukin-1 receptor binding; protein binding

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