

Human IL-1 alpha ELISA Kit | IL-1alpha elisa kit

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CATALOG #
AAA281316

REACTIVITY
Human

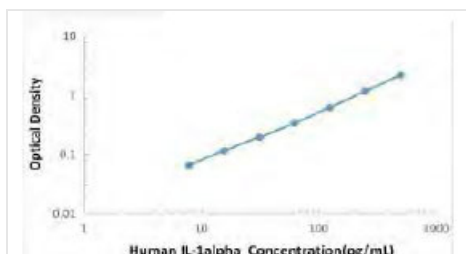
PRODUCT SYNONYMS

IL-1 alpha; Human IL-1 alpha ELISA Kit; IL-1alpha elisa kit

PRODUCT SPECIFICATIONS

Reactivity	Human
Sequence Length	271
Samples	Cell culture supernate, serum and plasma
Assay Type	Quantitative Sandwich
Preparation and Storage	Store at 4 degree C.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for IL-1alpha elisa kit	Principle of the Assay: This assay employs the quantitative sandwich enzyme immunoassay technique. A monoclonal antibody specific for IL-1alpha has been pre-coated onto a microplate. Standards and samples are pipetted into the wells and any IL-1alpha present is bound by the immobilized antibody. Following incubation unbound samples are removed during a wash step, and then a detection antibody specific for IL-1alpha is added to the wells and binds to the combination of capture antibody-IL-1alpha in sample. Following a wash to remove any unbound combination, and enzyme conjugate is added to the wells. Following incubation and wash steps, a substrate is added. A colored product TMB is formed in proportion to the amount of IL- 1alpha present in the sample. The reaction is terminated by addition of acid and absorbance is measured. A standard curve is prepared from seven IL-1alpha standard dilutions and IL-1alpha sample concentration determined. Background/Introduction: Interleukin 1 (IL-1) is a name that designates two proteins, IL-1alpha and IL-1beta, which are the products of distinct genes, but which recognize the same cell surface receptors. With the exception of skin keratinocytes, some epithelial cells, and certain cells of the central nervous system, IL-1 is not produced by the cells of healthy individuals. However, in response to stimuli such as those produced by inflammatory agents, infections, or microbial endotoxins, a dramatic increase in the production of IL-1 by macrophages and various other cell types is seen. For reviews on the properties and activities of IL-1alpha and IL-1beta, see references 1-3. IL-1alpha and IL-1beta are structurally related polypeptides that show approximately 25% homology at the amino acid (aa) level (2). Both are synthesized as 31 kDa precursors that are subsequently cleaved into proteins with molecular weights of approximately 17.5 kDa (4, 5). Neither IL-1alpha nor IL-1beta contains a typical hydrophobic signal peptide sequence (6-8), but evidence suggests that these factors can be secreted by non-classical pathways (9, 10). A large proportion of IL-1alpha is retained intracellularly in its precursor form (3). A portion of this unprocessed IL-1alpha is transported to the cell surface and remains associated with the cell membrane (1, 3, 11). The membrane-bound, unprocessed IL-1alpha is apparently biologically active, acting in a paracrine fashion on adjacent cells having IL-1 receptors (1, 3). The precursor form of IL-1beta, unlike the IL-1alpha precursor, shows little or no biological activity in comparison to the 17.5 kDa processed form (10-13). Intracellular IL-1beta consists exclusively of the 31 kDa precursor form (5). Extracellular IL-1beta consists of a mixture of both unprocessed and mature IL- 1beta. These results indicate that processing takes place subsequent to secretion and is not tightly coupled to secretion (5, 9, 10, 14). The specific protease apparently responsible for the processing of IL-1beta, designated interleukin1beta-converting enzyme (ICE), has been described (14). IL-1alpha and IL-1beta exert their effects by binding to specific receptors. Two distinct receptor types have been isolated that bind both forms of IL-1. An 80 kDa membrane bound receptor protein, IL-1 receptor type I (IL-1 RI), has been isolated from T cells, fibroblasts, keratinocytes, endothelial cells, synovial lining cells, chondrocytes, and hepatocytes (1, 3, 15). IL-1 RI has been cloned from mouse and human cells (16) and found to be a member of the Ig super family. A second type of IL-1 receptor, IL-1 receptor type II (IL-1 RII), has been found on B cells, neutrophils, and bone marrow cells (1, 3). This receptor has an apparent molecular weight of about 68 kDa and is also a member of the Ig super family. The two IL-1 receptor types show approximately 28% homology in their extracellular domains, but differ significantly in that the type II receptor has a cytoplasmic domain of only 29 aa residues, whereas the type I receptor has a cytoplasmic domain of 213 aa residues (1, 16). In general, IL-1alpha binds better to the type I receptor and IL-1beta binds better to the type II receptor (1).
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NCBI AND UNIPROT INFORMATION

NCBI GI #	27894330
NCBI GeneID	3552
NCBI Accession #	NP_000566.3
NCBI GenBank Nucleotide #	NM_000575.4
UniProt Accession #	P01583; Q53QF9; Q7RU02
Molecular Weight	30,607 Da
NCBI Official Full Name	interleukin-1 alpha
NCBI Official Synonym Full Names	interleukin 1 alpha
NCBI Official Symbol	IL1A
NCBI Official Synonym Symbols	IL1; IL-1A; IL1F1; IL1-ALPHA
NCBI Protein Information	interleukin-1 alpha

UniProt Protein Name	Interleukin-1 alpha
UniProt Gene Name	IL1A
UniProt Synonym Gene Names	IL1F1; IL-1 alpha

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/il-1alpha-human-elisa-kits/il-1-alpha/281316>