

IL-4 elisa kit

Swine IL-4 ELISA KIT

CATALOG #
AAA267244

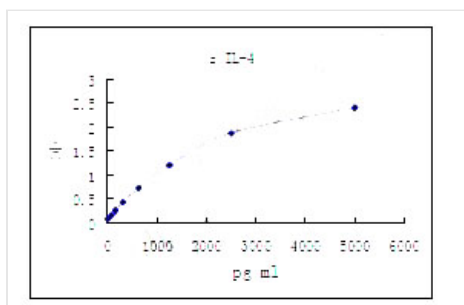
PRODUCT SYNONYMS

IL-4; Swine IL-4 ELISA KIT; IL-4 elisa kit

PRODUCT SPECIFICATIONS

Specificity	This assay recognizes both natural and recombinant rat IL-1alpha. The factors listed below were prepared at 50ng/ml in Standard /sample Diluent and assayed for cross-reactivity and no significant cross-reactivity or interference was observed.
Sequence Length	147
Assay Type	Quantitative Sandwich
Sensitivity	7pg/mL.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for IL-4 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 coloured product 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 at 450nm. A standard curve is prepared from seven IL-1alpha standard dilutions and IL-1alpha sample concentration determined!!Background/Introduction: Interleukin-1alpha (IL-1alpha, also known as IL-1F1) and IL-1beta (IL-1F2) are pleiotropic cytokines that belong to the IL-1 gene family. IL-1alpha and IL-1beta bind to the same cell surface receptors and share biological functions. The two proteins have approximately 23% amino acid (aa) sequence homology and both are synthesized as 31 kDa precursors that lack hydrophobic signal peptide sequences. Current evidence suggests that IL-1 proteins may be secreted via non-classical pathways. Rat IL-1alpha cDNA encodes a 270 aa residue pro-IL-1alpha precursor. The 114 aa pro-region contains a nuclear localization sequence, a lysine-based myristoylation site, one phosphorylation site, and one potential N-linked glycosylation site. The 156 aa mature region contains no cysteines and one potential N-linked glycosylation site. Pro-IL-1alpha is primarily localized to the cytosol after synthesis. It is known to translocate to the nucleus after cell activation and initiate gene transcription. Some IL-1alpha is released extracellularly and exists as either a membrane-bound form or as a circulating 17 kDa molecule. When membranebound, membrane association is mediated either via a poorly-understood cell surface lectin interaction with the glycosylated IL-1alpha pro-form, or by interaction of myristoylated pro-IL-1alpha with plasma membrane phospho-lipids. When released as a 17 kDa soluble form, calpain initiates cleavage of the pro-IL-1alpha precursor. Unlike pro-IL-1beta, which is biologically inactive, both pro-IL-1alpha and mature IL-1alpha have been shown to be biologically active. Within the mature protein, rat IL-1alpha shares 79%, 60%, 59%, 58%, 57%, and 56% aa sequence identity with mouse, rabbit, human, bovine, canine and feline proteins, respectively. Mammalian cells known to express IL-1alpha include brown adipocytes, keratinocytes, monocytes, macrophages, endothelial and smooth muscle cells, mast cells, Schwann cells, as well as osteoblasts and osteoclasts. Three type I transmembrane immunoglobulin superfamily proteins, IL-1 receptor type I (IL-1 R1), IL-1 receptor type II (IL-1 R2), and IL-1 receptor accessory protein (IL-1 RAcP, IL-1 R3) are involved in the formation of high affinity cell surface IL-1 receptor complexes. Both IL-1 R1 and IL-1 R2 can bind directly to IL-1alpha. IL-1 RAcP does not bind IL-1alpha directly, but interacts with IL-1 R1 in the presence of IL-1 to form the high-affinity receptor complex which is required for intracellular signal transduction. IL-1 RAcP also interacts with IL-1 R2 to form a non-functional high-affinity receptor complex that does not transduce IL-1 signals. Therefore, IL-1 R2 functions as a decoy receptor that attenuates IL-1alpha functions. IL-1alpha possesses a wide variety of biological activities and plays a central role in mediating immune and inflammatory responses. Normal production of IL-1alpha is critical for hematopoiesis, angiogenesis, osteoclast differentiation, and initiation of normal host responses to injury and infection. Inappropriate production of IL-1alpha has been implicated in the production of a variety of pathological conditions including sepsis, rheumatoid arthritis, inflammatory bowel disease, insulin-dependent diabetes mellitus, and atherosclerosis.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	42627877
NCBI GeneID	287287
NCBI Accession #	NP_958427.1
NCBI GenBank Nucleotide #	NM_201270.1
UniProt Accession #	P20096
Molecular Weight	16,247 Da
NCBI Official Full Name	interleukin-4
NCBI Official Synonym Full Names	interleukin 4
NCBI Official Symbol	IL4
NCBI Official Synonym Symbols	IL4e12
NCBI Protein Information	interleukin-4

UniProt Protein Name	Interleukin-4
UniProt Gene Name	IL4
UniProt Synonym Gene Names	IL-4; IL-4; BSF-1

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/elisa-kits/il-4/267244>