

Swine IL-10 ELISA Kit | IL-10 elisa kit

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CATALOG #
AAA309922

REACTIVITY
Swine

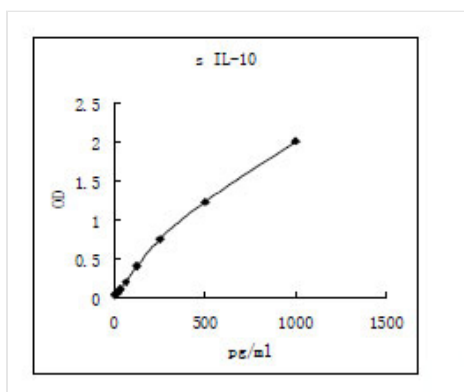
PRODUCT SYNONYMS

IL-10; Swine IL-10 ELISA KIT; Swine IL-10; IL-10 elisa kit

PRODUCT SPECIFICATIONS

Reactivity	Swine
Specificity	This assay recognizes both recombinant and natural porcine IL-10. The factors listed below were prepared at 50 ng/mL in Calibrator Diluent RD6-33 and assayed for cross-reactivity. Preparations of the following factors at the same concentrations in a mid-range porcine IL-10 control were assayed for interference. No significant cross-reactivity or interference was observed.
Assay Type	Quantitative Sandwich
Sensitivity	7pg/mL.
Preparation and Storage	Store at 4 degree C

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for IL-10 elisa kit

Principle of the Assay: This assay employs the quantitative sandwich enzyme immunoassay technique. A monoclonal antibody specific for IL-10 has been pre-coated onto a microplate. Standard, control, or sample and the working solution of Biotin-Conjugate are pipetted into the wells. Following incubation and wash steps, any IL-10 present is bound by the immobilized antibody and the detection antibody specific for IL-10 is binds to the combination of capture antibody-IL-10 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 is formed in proportion to the amount of IL-10 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-10 standard dilutions and IL-10 sample concentration determined!!

Background/Introduction: Interleukin 10, also known as cytokine synthesis inhibitory factor (CSIF), is the charter member of the IL-10 cytokine family. This family currently comprises IL-10, IL-19, IL-20, IL-22, IL-24, and IL-26/AK155 (1-4). All IL-10 family members are secreted ?-helical proteins. Porcine IL-10 is a secreted, possibly glycosylated, polypeptide with an 18 kDa molecular weight (5). Based on human studies, porcine IL-10 is likely to circulate as a nondisulfide-linked homodimer (3). Porcine IL-10 is synthesized as a 175 amino acid (aa) precursor with an 18 aa signal sequence and a 157 aa mature form. The mature segment has one potential N-linked glycosylation site plus four cysteines which form two intrachain disulfide bridges (6). Mature porcine IL-10 shows 71%, 70%, 76%, 75%, 77%, and 71% aa sequence identity to rat (7), mouse (8), human (9), guinea pig (10), canine (11), and cotton rat (12) IL-10, respectively. Upon activation, mammalian cells known to secrete IL-10 include NK cells (13), cytotoxic CD8+ T cells secreting Th2-like cytokines (14), CD4+CD45RA-(memory) Th1 and Th2 cells (15), macrophages (16), monocytes (17), CD5+ and CD5-B cells (18, 19), dendritic cells (20, 21), hepatic stellate (Ito cells) (22), keratinocytes (23), melanoma cells (24), mast cells (25), placental cytotrophoblasts (26), and fetal erythroblasts (27). The functional receptor for IL-10 (IL-10 R) in pigs has not been reported. By analogy to human, it would be expected to be composed of two 110 kDa alpha-chains (or IL-10 R1) and two 75 kDa beta-chains (or IL-10 R2) (28-31). The alpha-chain binds IL-10 and transduces a signal in the presence of a beta-chain complex (29). Both receptors are members of the class II cytokine receptor family (CRF2) that is characterized by the presence of type III fibronectin domains and conserved tryptophans (29, 31). This class does not possess the WSXWS motif characteristic of the class I CRF. There is no significant aa sequence identity (< 30%) between human IL-10 R1 and IL-10 R2. IL-10 has myriad effects on a variety of cell types. On activated B cells, IL-10 can induce plasma cell formation (32) and the secretion of either IgG (33, 34) or IgA (in the presence of TGF-beta1 and/or IL-4) (34, 35). In the presence of IL-2, CD56+ NK cells will respond to IL-10 with increased proliferation plus IFN-gamma?and TNF-alpha secretion (36). Conversely, on macrophages, IL-10 is known to down regulate IL-1, TNF-alpha, and IL-6 production (37). On dendritic cells, IL-10 has been shown to interfere with antigen-presenting cell function by down modulating stimulatory and co-stimulatory molecules (38, 39). On monocytes, IL-10 is reported to direct monocyte differentiation into cytotoxic CD16+ macrophages rather than antigen-presenting dendritic cells (40-42).

NCBI AND UNIPROT INFORMATION

NCBI GI #	385202765
NCBI GeneID	397106
Molecular Weight	19,934 Da
NCBI Official Full Name	IL-10, partial
NCBI Official Symbol	IL10
NCBI Official Synonym Symbols	CSIF; IL-10
NCBI Protein Information	interleukin-10
UniProt Protein Name	Interleukin-10
UniProt Gene Name	IL10
UniProt Synonym Gene Names	IL-10; CSIF

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.