

Interleukin-22 ELISA Kit | IL-22 elisa kit

Interleukin-22 (IL-22)

CATALOG #
AAA77885

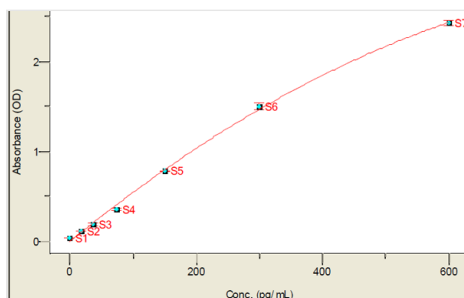
PRODUCT SYNONYMS

Interleukin-22; Interleukin-22 (IL-22); IL-22 elisa kit

PRODUCT SPECIFICATIONS

Sequence Length	179
Samples	Serum, Cell Culture Supernatant, and other biological fluids
Assay Type	Sandwich
Sensitivity	The minimum detectable dose of human IL-22 was determined by adding two standard deviations to the mean optical density value of 16 zero standard replicates and calculating the corresponding concentration from the standard curve. The minimum detectable dose of human IL-22 calculated from calibrate I diluted standard curve was <9.2 pg/mL.
Intra-assay Precision	To determine within-run precision, three different samples of known concentration were assayed by using 16 replicates in 1 assay.
Inter-assay Precision	To determine between-run precision, three different samples of known concentration were assayed by using replicates on 8 different assays.
Intended Uses	This Human IL-22 ELISA kit is to be used for the in vitro quantitative determination of human interleukin 22 (IL-22) concentrations in serum, cell culture supernatant, and other biological fluids. This kit is intended for LABORATORY RESEARCH USE ONLY and is not for use in therapeutic procedures.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for IL-22 elisa kit	Principle of the assay: This human IL-22 enzyme-linked immunosorbent assay (ELISA) applies a technique called a quantitative sandwich immunoassay. The microtiter plate provided in this kit has been pre-coated with a monoclonal antibody specific for human IL-22. Standards or samples are then added to the appropriate microtiter plate wells and incubated. Human IL-22, if present, will bind and become immobilized by the antibody pre-coated on the wells. Then, a preparation of biotin conjugated detection antibody for human IL-22 is added to each well and incubated. The Biotin conjugated antibody will bind to human IL- 22 during incubation. The microtiter plate wells are thoroughly washed to remove unbound components in the samples and biotin conjugate preparation. Avidin has a very high affinity to biotin. In order to quantify the amount of human IL-22 present in the sample, a preparation of horseradish peroxidase (HRP)-conjugated Avidin is added to each well. HRP will be linked to the IL-22 detection antibody through high affinity binding of Biotin and Avidin, and connect indirectly with human IL-22 immobilized on the well. After incubation, the wells are thoroughly washed to remove all unbound HRP-conjugated antibodies and a TMB (3,3',5,5' tetramethyl-benzidine) substrate solution is added to each well. The enzyme (HRP) and substrate are allowed to react over a short incubation period. Only those wells that contain human IL-22 will exhibit a change in colour and the extent of colour change is proportional to the amount of human IL-22 in standards/samples. The enzyme-substrate reaction is terminated by the addition of a sulphuric acid solution and the colour change is measured spectrophotometrically at a wavelength of 450 nm +/- 2 nm. In order to measure the concentration of human IL-22 in the samples, this kit contains two calibration diluents (Calibrator Diluent I for serum/plasma testing and Calibrator Diluent II for cell culture supernatant/urine testing). According to the testing system, the provided standard is diluted (2-fold) with the appropriate Calibrator Diluent and assayed at the same time as the samples. This allows the operator to produce a standard curve of Optical Density (O.D.) versus IL-22 concentration (pg/mL). The concentration of IL-22 in the samples is then determined by comparing the O.D. of the samples to the standard curve. Background: Interleukin 22 (IL-22) was identified in 2000 as an IL-10 related cytokine that signals through class II cytokine receptor proteins (1). IL-22 signaling is different from IL-10 since some cell lines respond to IL-22 by activating STAT (Signal Transducer and Activator of Transcription) proteins, but are unresponsive to IL-10 (1). The counterpart of human IL-22 in mouse is called IL-TiF (3). IL-22 functions through IL-22 receptor (IL- 22R), and a common IL-10R2 receptor that is shared by other members of the IL-10 family (2). A natural antagonist of IL-22, IL- 22 binding protein, was found to downregulate IL-22 function (4). IL-22 is produced by dendritic cells, T-cells and natural killer cells during bacterial infection, auto-immunity and tissue inflammation (6, 7). IL-22 acts upon innate immunity cells through its receptors expressed exclusively on these cells. In CD4+ T helper cells, IL-22 expression has been found to be associated with Th17 and Th1. Recently, an IL-22 expressing T helper cell subset (Th22) was characterized (10) which is distinct from other T cells by coexpression of the chemokine receptor CCR6 and the skin-homing receptors CCR4 and CCR10. IL-22 expression is elevated in psoriatic skin inflammation (5, 8, 11, 12), atopic dermatitis (13), inflammatory bowel disease (14). In cutaneous T-cell lymphoma, IL-22 dominates the tumor microenvironment and STAT3 phosphorylation was observed (17). IL-22 was also found to promote murine hepatocyte survival (16) and ameliorate intestinal inflammation in mouse ulcerative colitis model (9).
Product Categories/Family for IL-22 elisa kit	ELISA Kits for Human Cytokines and Receptors

NCBI AND UNIPROT INFORMATION

NCBI GI #	10092625
NCBI GeneID	50616
NCBI Accession #	NP_065386.1
NCBI GenBank Nucleotide #	NM_020525.4
Molecular Weight	20,011 Da
NCBI Official Full Name	interleukin-22
NCBI Official Synonym Full Names	interleukin 22
NCBI Official Symbol	IL22
NCBI Official Synonym Symbols	TIFa; IL-21; IL-22; ILTIF; IL-TiF; IL-D110; zcyto18; TIFIL-23
NCBI Protein Information	interleukin-22; IL-10-related T-cell-derived inducible factor; IL-10-related T-cell-derived-inducible factor; cytokine Zcyto18

UniProt Protein Name	Interleukin-22
UniProt Gene Name	IL22
UniProt Entry Name	IL22_HUMAN

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://stage.aaabiotech.com/il-22-elisa-kits/interleukin-22/77885>