

Human IL-2 ELISA Kit | IL-2 elisa kit

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CATALOG #
AAA281548

REACTIVITY
Human

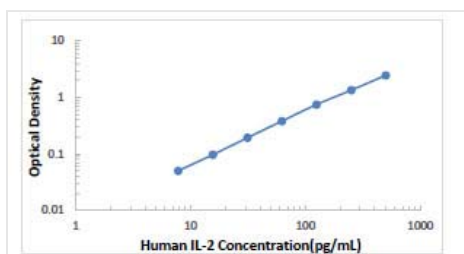
PRODUCT SYNONYMS

IL-2; Human IL-2 ELISA Kit; IL-2 elisa kit

PRODUCT SPECIFICATIONS

Reactivity	Human
Specificity	This assay recognizes both recombinant and natural human IL-2. The factors listed below were prepared at 50ng/ml and assayed for cross-reactivity.
Samples	Cell culture supernates, serum and plasma
Assay Type	Quantitative Sandwich
Sensitivity	< 3.9 pg/mL
Intra-assay Precision	Three samples of known concentration were tested 20 times on one plate to evaluate the Intra-plate precision.
Inter-assay Precision	Three samples of known concentration were tested 20 times separate assays to evaluate the Inter-plate precision. Assay were using two lots of components.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for IL-2 elisa kit

Principle of the Assay: This assay employs the quantitative sandwich enzyme immunoassay technique. A monoclonal antibody specific for IL-2 has been pre-coated onto a microplate. Standards and samples are pipetted into the wells and any IL-2 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-2 is added to the wells and binds to the combination of capture antibody-IL-2 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-2 present in the sample. The reaction is terminated by addition of acid and absorbance is measured. A standard curve is prepared from seven IL-2 standard dilutions and IL-2 sample concentration determined.

Background/Introduction: Interleukin 2 (IL-2), also known as T cell growth factor (TCGF), is a 15-18 kDa variably glycosylated alpha-helical polypeptide that is a member of the Common gamma Chain (gammaC) cytokine family (1-4). It exists as a monomer and has a notably short half-life (< 30 minutes) (1). Human IL-2 is synthesized as a 153 amino acid precursor that contains a 20 aa signal sequence plus a 133 aa mature region (5, 6). The mature region is alpha-helical in nature, and contains one utilized O-linked glycosylation site at Thr3 plus three cysteines, two of which form an intrachain disulfide bond that is essential for activity (7). Mature human IL-2 shares 73%, 66%, 78% and 97% aa identity with canine, rat, feline and rhesus monkey IL-2, respectively. Although human IL-2 shares only approximately 60% aa identity with the highly polymorphic mouse IL-2, human IL-2 is known to be active on mouse IL-2 responsive cells. Cells reported to secrete IL-2 include gammadelta T cells (8), activated conventional CD4+ and CD8+ T cells (1, 9), neurons (10, 11), microglia (12), and hematopoietic stem cells (13). The receptor for IL-2 (IL-2 R) is composed of three subunits, the 55 kDa CD25/IL-2 Ralpha chain, the 70 kDa IL-2 Rbeta chain, and the 65 kDa Common gamma Chain (1, 3). IL-2 first binds to CD25, the binary complex then recruits IL-2 Rbeta and gammaC to form the quaternary signaling complex (1, 14). In addition to IL-2, IL-2 Rbeta is used by IL-15 in its quaternary signaling complex. gammaC also serves as a signaling receptor for IL-4, -7, -9, -15, and -21 (1, 3). In vitro studies have shown an important role for IL-2 in T cell activation and expansion. In vivo, IL-2 is critical for the development, maintenance and function of regulatory T cells (Treg) which provide protection against autoimmune disease. On the other hand, IL-2 can also promote autoimmune inflammation in target organs through its roles in regulating the expression of T cell trafficking genes, and production of Th2 cytokines. Within the CD8+ T cell subset, IL-2 is essential for optimal primary responses and differentiation into terminal effector cells. IL-2 also promotes the development of activated CD8+ T cells into memory cells. (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/human-elisa-kits/il-2/281548>