Cytotoxic T-Lymphocyte Associated Antigen 4 (CTLA4) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	Cytotoxic T-Lymphocyte Associated Antigen 4 (CTLA4), ELISA Kit
Full Product Name	Human Cytotoxic T-Lymphocyte Associated Antigen 4 ELISA Kit
Product Gene Name	CTLA4 elisa kit
Species Reactivity	Human
Assay Type	Sandwich
Samples	Serum, Plasma, Tissue Homogenate, Feces and Urine
Detection Range	0.25ng/ml-8ng/ml.
Sensitivity	0.1ng/ml.
Specificity	No significant cross-reactivity or interference between Human CTLA4 and analogues was observed.
Preparation and Storage	Store all reagents at 2-8 degree C
Inter-assay Precision	Inter-assay CV (%) is less than 15%. [CV(%) = SD/mean ×100]
Intra-assay Precision	Intra-assay CV (%) is less than 15%.
Molecular Weight	24,656 Da
OMIM	109100
3D Structure	ModBase 3D Structure for P16410
Intended Uses	This Quantitative Sandwich ELISA kit is only for in vitro research use only, not for drug, household, therapeutic applications! It is intended to be determinated CTLA4 concentrations in Human serum, plasma and other body fluids. Using Purified Human CTLA4 antibody to coat Microelisa Stripplate wells to make solid-phase antibody, then add CTLA4 and CTLA4 antibody which has been labeled with HRP to wells, then the reactants become antibody-antigen-antibody-enzyme complex, after washing completely, add TMB substrate solution, TMB substrate becomes blue color under HRP enzyme-catalyzed, reaction is terminated by the addition of a sulphuric acid solution and the color change is measured spectrophotometrically at a wavelength of 450 nm. The concentration of CTLA4 in the samples is then determined by comparing the O.D. of the samples to the standard curve.
Related Product Information for CTLA4 elisa kit	**Background:** This Quantitative Sandwich ELISA kit is only for in vitro research use only! It is intended to be determinated CTLA4 concentrations in Human serum, plasma and other body fluids. Using Purified Human CTLA4 antibody to coat Microelisa Stripplate wells to make solid-phase antibody, then add CTLA4 and CTLA4 antibody which has been labeled with HRP to wells, then the reactants become antibody-antigen-antibody-enzyme complex, after washing completely, add TMB substrate solution, TMB substrate becomes blue color under HRP enzyme-catalyzed, reaction is terminated by the addition of a sulphuric acid solution and the color change is measured spectrophotometrically at a wavelength of 450 nm. The concentration of CTLA4 in the samples is then determined by comparing the O.D. of the samples to the standard curve.
Other Notes	Small volumes of CTLA4 elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

Searchable Terms for CTLA4 purchase	MBS023839 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Cytotoxic T-Lymphocyte Associated Antigen 4 (CTLA4) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing CTLA4. The ELISA analytical biochemical technique of the MBS023839 kit is based on CTLA4 antibody-CTLA4 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect CTLA4 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, CTLA4. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CTLA4. It may not necessarily be applicable to this product.

NCBI GI #	21361212
NCBI GeneID	1493
NCBI Accession #	NP_005205.2
UniProt Primary Accession #	P16410
UniProt Secondary Accession #	O95653; Q0PP65; Q52MC1; Q53TD5; Q5S005; Q8WXJ1; Q96P43; Q9UKN9; A0N1S0; E9PDH0
UniProt Related Accession #	P16410
GenBank Nucleotide #	NM_005214.4
NCBI Official Full Name	cytotoxic T-lymphocyte protein 4 isoform CTLA4-TM
NCBI Official Synonym Full Names	cytotoxic T-lymphocyte-associated protein 4
NCBI Official Symbol	CTLA4
NCBI Official Synonym Symbols	CD; GSE; GRD4; CD152; CTLA-4; IDDM12; CELIAC3
UniProt Protein Name	Cytotoxic T-lymphocyte protein 4
UniProt Synonym Protein Names	Cytotoxic T-lymphocyte-associated antigen 4
Protein Family	Cytotoxic T-lymphocyte protein
UniProt Gene Name	CTLA4
UniProt Synonym Gene Names	CD152; CTLA-4
UniProt Entry Name	CTLA4_HUMAN
NCBI Protein Information	cytotoxic T-lymphocyte protein 4; CD152 isoform; celiac disease 3; cytotoxic T-lymphocyte antigen 4; insulin-dependent diabetes mellitus 12; cytotoxic T-lymphocyte-associated antigen 4; cytotoxic T-lymphocyte-associated serine esterase-4; cytotoxic T lymphocyte associated antigen 4 short spliced form; ligand and transmembrane spliced cytotoxic T lymphocyte associated antigen 4
NCBI Summary for CTLA4	This gene is a member of the immunoglobulin superfamily and encodes a protein which transmits an inhibitory signal to T cells. The protein contains a V domain, a transmembrane domain, and a cytoplasmic tail. Alternate transcriptional splice variants, encoding different isoforms, have been characterized. The membrane-bound isoform functions as a homodimer interconnected by a disulfide bond, while the soluble isoform functions as a monomer. Mutations in this gene have been associated with insulin-dependent diabetes mellitus, Graves disease, Hashimoto thyroiditis, celiac disease, systemic lupus erythematosus, thyroid-associated orbitopathy, and other autoimmune diseases. [provided by RefSeq, Jul 2008]

UniProt Comments for CTLA4	CTLA-4: Inhibitory receptor acting as a major negative regulator of T-cell responses. The affinity of CTLA4 for its natural B7 family ligands, CD80 and CD86, is considerably stronger than the affinity of their cognate stimulatory coreceptor CD28. Genetic variation in CTLA4 influences susceptibility to systemic lupus erythematosus (SLE). SLE is a chronic, inflammatory and often febrile multisystemic disorder of connective tissue. It affects principally the skin, joints, kidneys and serosal membranes. SLE is thought to represent a failure of the regulatory mechanisms of the autoimmune system. Genetic variations in CTLA4 may influence susceptibility to Graves disease, an autoimmune disorder associated with overactivity of the thyroid gland and hyperthyroidism. Genetic variation in CTLA4 is the cause of susceptibility to diabetes mellitus insulin-dependent type 12 (IDDM12). A multifactorial disorder of glucose homeostasis that is characterized by susceptibility to ketoacidosis in the absence of insulin therapy. Clinical fetaures are polydipsia, polyphagia and polyuria which result from hyperglycemia-induced osmotic diuresis and secondary thirst. These derangements result in long-term complications that affect the eyes, kidneys, nerves, and blood vessels. Genetic variation in CTLA4 is the cause of susceptibility to celiac disease type 3 (CELIAC3). It is a multifactorial disorder of the small intestine that is influenced by both environmental and genetic factors. It is characterized by malabsorption resulting from inflammatory injury to the mucosa of the small intestine after the ingestion of wheat gluten or related rye and barley proteins. In its classic form, celiac disease is characterized in children by malabsorption and failure to thrive. 4 isoforms of the human protein are produced by alternative splicing. Protein type: Membrane protein, integral; Immunoglobulin superfamily Chromosomal Location of Human Ortholog: 2q33 Cellular Component: Golgi apparatus; perinuclear region of cytoplasm; integral to plasma membrane; plasma membrane; clathrin-coated endocytic vesicle; external side of plasma membrane Molecular Function: protein binding Biological Process: B cell receptor signaling pathway; negative regulation of T cell proliferation; positive regulation of apoptosis; negative regulation of regulatory T cell differentiation; T cell costimulation; negative regulation of immune response; immune response; negative regulation of B cell proliferation; response to DNA damage stimulus Disease: Autoimmune Lymphoproliferative Syndrome, Type V; Celiac Disease, Susceptibility To, 3; Diabetes Mellitus, Insulin-dependent, 12; Systemic Lupus Erythematosus; Hashimoto Thyroiditis
Research Articles on CTLA4	**1.** The obtained results give more information on the distribution of the CTLA-4 polymorphism in Polish AITD children, and further support the proposal that the CTLA-4 gene plays an important role in a thyroid autoantibodies production.
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