

Human CD154 ELISA Kit | CD40LG elisa kit

Human CD154 ELISA Kit

CATALOG # AAA261714	REACTIVITY Human	APPLICATIONS ELISA
-------------------------------	----------------------------	------------------------------

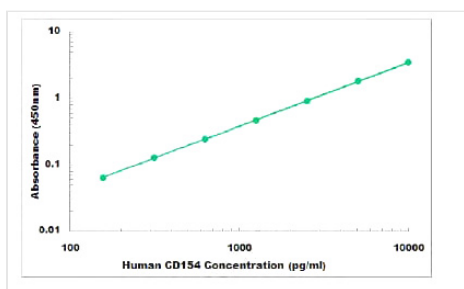
PRODUCT SYNONYMS

CD154; Human CD154 ELISA Kit; CD40L; TNFSF5; TRAP; CD40 ligand; CD40-L; T-cell antigen Gp39; TNF-related activation protein; Tumor necrosis factor ligand superfamily member 5; CD40LG elisa kit

PRODUCT SPECIFICATIONS

Reactivity	Human
Specificity	The Human CD154 ELISA Kit allows for the detection and quantification of endogenous levels of natural and/or recombinant Human CD154 proteins within the range of 156.3 pg/ml - 10000 pg/ml.
Sequence Length	261
Samples	Cell Culture Supernatants, Serum, Plasma.
Sensitivity	40 pg/ml.
Applicable Applications for CD40LG elisa kit	ELISA (Sandwich ELISA)
Preparation and Storage	Shipped and store at 4 degree C for 6 months, store at -20 degree C for one year. Avoid freeze/thaw cycles.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for CD40LG elisa kit	Principle of the Assay The Human CD154 ELISA (Enzyme-Linked Immunosorbent Assay) kit is an in vitro enzyme-linked immunosorbent assay for the quantitative measurement of Human CD154 in Cell Culture Supernatants, Serum, Plasma. This assay employs an antibody specific for Human CD154 coated on a 96-well plate. Standards and samples are pipetted into the wells and CD154 present in a sample is bound to the wells by the immobilized antibody. The wells are washed and biotinylated anti-Human CD154 antibody is added. After washing away unbound biotinylated antibody, HRP-conjugated streptavidin is pipetted to the wells. The wells are again washed, a TMB substrate solution is added to the wells and color develops in proportion to the amount of CD154 bound. The Stop Solution changes the color from blue to yellow, and the intensity of the color is measured at 450 nm. Background/Introduction: CD40 Ligand (CD40L), also known as CD154, gp39, TNFSF5, TRAP (TNF-Related Activation Protein) or TBAM (T-cell B-cell Activating Molecule), is a multifunctional ligand in the TNF superfamily (1-4). Interaction between CD40 and CD40L is critical to the control of thymus-dependent humoral immunity and cell-mediated immune responses (5-10). The major component of the contact-dependent signal leading to B cell activation is CD40L. CD40L stimulates B cell secretion of immunoglobulin isotypes in the presence of cytokines. CD40L is a 39 kDa, 261 amino acid (aa) glycoprotein that can form homotrimers typical of other TNFSF members (1-4, 11, 12). Proteolytic cleavage can also produce 15-18 kDa soluble forms of CD40L (13, 14). Activated T cells and platelets express both a membrane-associated and a soluble form of CD40L (sCD40L) (13, 15, 16). Platelet activation during plasma and serum sample preparation can result in artificially elevated sCD40L levels (17-20). Conversely, serum samples stored above 2-8 degree C show a progressive loss of the sCD40L signal (21). sCD40L lacks the transmembrane region and a portion of the extracellular domain but contains the entire TNF- homology region. Both the membrane-bound and soluble forms of CD40L are active (22). The receptor for CD40L is CD40, a member of the TNF receptor superfamily (TNFRSF5). Interaction of CD40L with CD40 not only induces proliferation and isotype switching in B lymphocytes but also mediates a broad variety of other immune and inflammatory responses (5-7). CD40 signaling has been linked with pathogenic processes of chronic inflammatory diseases such as autoimmune diseases, neurodegenerative disorders, graft-versus-host disease, cancer, and atherosclerosis (8). The loss of interaction between CD40 and CD40L can result in impairment of T lymphocyte function, B lymphocyte differentiation, and monocyte function. CD40L is expressed primarily on activated CD4+ T cells; however, vascular endothelial cells, smooth muscle cells, macrophages, basophils, eosinophils, monocytes, dendritic cells, fibroblasts, and mast cells also express CD40L. Cytokine stimulation (e.g. IL-1beta, TNF-alpha, or IFN-gamma) can increase surface levels and de novosynthesis of CD40L in certain cell types (23). Hyper-IgM syndrome (HIGM) is an immunodeficiency characterized by elevated concentrations of serum IgM and the absence of serum IgG, IgA, and IgE. It is caused by mutations within the CD40L gene leading to defective expression on the membrane of activated T lymphocytes (24, 25). B lymphocytes from HIGM patients express functional CD40 and respond normally to wild-type CD40L, but their Tlymphocytes are unable to stimulate CD40 signaling pathways (26, 27). CD40L may play multiple roles in HIV infection (28). It may contribute to viral replication control by inducing HIV-suppressive chemokines, by downregulating monocyte cell surface expression of CCR5 and CD4, and by supporting the production of anti-HIV antibodies and cytotoxic T cells (28-31). It can also promote HIV replication in CD4+ T lymphocytes by activating antigen-presenting cells, subsequently leading to increased CD4+ T cell activation (28). With the onset of AIDS, CD40L-expressing CD4+ T cells become selectively depleted. This loss may explain the similarity between the opportunistic infections characteristic of AIDS and those observed with congenital CD40L deficiency (28). Elevated levels of sCD40L have been observed in sera from patients with systemic lupus erythematosus (SLE), chronic lymphocytic leukemia (CLL), and unstable angina (32-34). A direct relationship has been seen between disease severity and sCD40L in SLE patient sera (32). Aberrant expression of CD40L may thus contribute to autoantibody secretion in SLE through activation of bystander B lymphocytes, including cells that have been exposed to self antigens (32). Prolonged survival of malignant CLL cells may be linked to elevated levels of biologically active sCD40L (33). CD40L can mediate the resistance of CLL cells to apoptosis by Fas Ligand and fludarabine (33). Enhanced levels of both soluble and membrane-bound forms of CD40L in angina patients suggests that the CD40L-CD40 interaction may play a pathogenic role in the atherosclerotic process and in promoting acute coronary syndromes (34).
--	--

NCBI AND UNIPROT INFORMATION

NCBI GI #	231718
NCBI GeneID	959
UniProt Accession #	P29965
Molecular Weight	29,274 Da
NCBI Official Full Name	CD40 ligand

NCBI Official Synonym Full Names	CD40 ligand
NCBI Official Symbol	CD40LG
NCBI Official Synonym Symbols	IGM; IMD3; TRAP; gp39; CD154; CD40L; HIGM1; T-BAM; TNFSF5; hCD40L
NCBI Protein Information	CD40 ligand
UniProt Protein Name	CD40 ligand
UniProt Gene Name	CD40LG
UniProt Synonym Gene Names	CD40L; TNFSF5; TRAP; CD40-L; TRAP
UniProt Entry Name	CD40L_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.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: <https://stage.aaabiotech.com/cd40lg-human-elisa-kits/cd154/261714>