

Human Lactoferrin ELISA Kit | HLTFKT elisa kit

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CATALOG #
AAA37862

REACTIVITY
Human

PRODUCT SYNONYMS

Lactoferrin; Human Lactoferrin ELISA Kit; Plasma Protein ELISA Kits; Human Kits; HLTFKT elisa kit

PRODUCT SPECIFICATIONS

Reactivity	Human
Specificity	This sandwich ELISA recognises both natural and recombinant human IL-6 sR. This kit exhibits no significant cross-reactivity with factors related to or associated with IL-6 sR such as rhIL-6, rhsgp130 or mL-6???. No significant cross-reactivity was observed with recombinant human: IL-1alpha, IL-1beta, IL-1ra, IL-2 IL-3, IL-3??IL-4, IL-5, IL-7, IL-8, IL-9, IL-10, IL-11, beta-ECGR, EGF, EPO, FGF acidic, FGF basic, FGF-4, G-CSF, GM-CSF, sgp 130, GRO?alpha, IFN-gamma, IGF-I IGF-II, LIF, M-CSF, MCP-1, MIP-1alpha, MIP-1beta, OSN, PDGF-AA, PDGF-AB, PDGF-BB, RANTES, SCF, SLPI, TGF-?alpha, TGF-beta, TNF-?alpha, TNF-beta, sTNF RI, sTNF RII.
Sequence Length	710
Samples	Serum, Plasma, Cell Culture Supernatant, And Other Biological Fluids
Assay Type	Quantitative Sandwich
Intra-assay Precision	To determine within-run precision, three different samples of known concentration were assayed by replicates of twenty in 1 assay
Inter-assay Precision	To determine between-run precision, three different samples of known concentration were assayed by replicates on 20 different assays.

ADDITIONAL INFORMATION

Related Product Information for HLTFTK elisa kit	Intended Uses: This Human Interleukin-6 soluble receptor ELISA Kit is to be used for the in vitro quantitative determination of human interleukin-6 soluble receptor (IL-6sR) concentrations in serum, plasma, cell culture supernatant, and other biological fluids. This kit is intended for LABORATORY RESEARCH ONLY Principle of the Assay: This IL-6 sR 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 to IL-6sR. Standards or samples are then added to the appropriate microtiter plate wells with a biotin-conjugated polyclonal antibody preparation specific for IL-6sR and incubated. IL-6sR if present, will bind and become immobilized by the antibody pre-coated on the wells and then be "sandwiched" by biotin conjugate. The microtiter plate wells are thoroughly washed to remove unbound IL-6sR and other components of the sample. In order to quantitatively determine the amount of IL-6sR present in the sample, Avidin conjugated to Horseradish Peroxidase (HRP) is added to each microplate well and incubated. Avidin is a tetramer containing four identical subunits that each have a high affinity-binding site for biotin. The wells are thoroughly washed to remove all unbound HRP-conjugated Avidin 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 IL-6sR, biotin-conjugated antibody and enzyme-conjugated Avidin will exhibit a change in colour. 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 IL-6sR in the samples this kit includes two calibration diluents (Calibrator Diluent I for serum/plasma testing and Calibrator Diluent II for cell culture supernatant 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-6sR concentration (pg/mL). The concentration of IL-6sR in the samples is then determined by comparing the O.D. of the samples to the standard curve!!Background/Introduction: Interleukin-6 (IL-6) is a multifunctional cytokine produced by a wide variety of cell types including monocyte/macrophages, T cells, fibroblasts, hepatocytes, vascular endothelial cells, cardiac myxomas, bladder cell carcinomas, myelomas, astroglomas, and glioblastomas. The effects of IL-6 on different cell types are numerous and varied. These activities include: stimulation of B cell differentiation and antibody secretion; action as a co-stimulant with PHA or Con A to increase IL-2 production and IL-2 receptor expression by T cells; enhancement of differentiation of cytotoxic T cells; action as a growth factor for mature thymic or peripheral T cells, myelomas, hybridomas, plasmacytomas, keratinocytes, and mesangial cells; colony-stimulating activity on hematopoietic cells; induction of neuronal cell differentiation; induction of maturation of megakaryocytes; and stimulation of production of acute phase response proteins by hepatocytes. These various activities indicate that IL-6 plays a major role in the mediation of the inflammatory and immune responses initiated by infection or injury. Elevated IL-6 levels have been reported to be associated with a variety of diseases, including autoimmune diseases, mesangial proliferative glomerulonephritis, psoriasis, and malignancies such as plasmacytomas and myelomas. For reviews of the properties and activities of IL-6, see references 1 to 3. The biological activities of IL-6 are initiated by binding of the cytokine to a high affinity receptor complex consisting of two membrane glycoproteins; an 80 kDa component receptor that binds IL-6 with low affinity (IL-6R) and a signal-transducing component of 130 kDa (gp130) that does not bind IL-6 by itself, but is required for high affinity binding of IL-6 by the complex. IL-6R and gp130 have been cloned, sequenced and expressed (4-7). A soluble form of the IL-6 R with a molecular weight of approximately 50 kDa has been found in the urine of healthy adult humans (8), in culture medium conditioned by the growth of a human myeloma cell line (9), in culture supernatants from PHA-stimulated human PBMC and HTLV-1 positive T cell lines (10) and in the serum of HIV-seropositive blood donors (10). This soluble form of the receptor apparently arises from proteolytic cleavage of membrane-bound IL-6R. Soluble forms of human and mouse IL-6 have also been constructed by insertion of termination codons into the regions of the IL-6R cDNAs encoding the external portions of the receptors and prior to the transmembrane domains (11, 12). These soluble receptors have been expressed in COS7 and CHO cells (11, 12) and have been shown to bind IL-6 in solution and to augment the activity of IL-6 as a result of the binding of the IL-6/IL-6 sR complex to membrane-bound gp130 (11, 12). The regulation in vivo of the shedding of the soluble IL-6Rs and the function and significance of these soluble receptors in biological fluids is not currently understood. It has been suggested, however, that pathological states involving elevated levels to IL-6 might also be associated with increased production of soluble IL-6Rs (10). This IL-6sR ELISA is a 3.5-hour solid phase immunoassay readily applicable to measure IL-6sR levels in serum, plasma, cell culture supernatant, and other biological fluids in the range of 0 to 2000 pg/mL. It showed no cross reactivity with other cytokines tested. This IL-6sR ELISA is expected to be effectively used for further investigations into the relationship between IL-6sR and the various conditions mentioned.
Product Categories/Family for HLTFTK elisa kit	HUMAN PLASMA PROTEINS

NCBI AND UNIPROT INFORMATION

NCBI GI #	85700158
NCBI GeneID	4057
UniProt Accession #	P02788; O00756; Q16780; Q16785; Q16786; Q16789; Q5DSM0; Q8IU92; A8K9U8; B2MV13; B7Z4X2; E7EQH5
Molecular Weight	73,161 Da
NCBI Official Full Name	Lactotransferrin
NCBI Official Synonym Full Names	lactotransferrin
NCBI Official Symbol	LTF
NCBI Official Synonym Symbols	LF; HLF2; GIG12; HEL110
NCBI Protein Information	lactotransferrin
UniProt Protein Name	Lactotransferrin
UniProt Gene Name	LTF
UniProt Synonym Gene Names	GIG12; LF; Lactoferrin; Lfcin-H

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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