

Human IL-6 Sandwich ELISA Kit Datasheet

For the quantitative detection of Human IL-6 concentrations in Serum, Plasma, Cell culture supernatants, Urine.

General Information

Catalogue Number	KE00007
Product Name	Human IL-6 Sandwich ELISA Kit
Species cross-reactivity	Human
Range (calibration Range)	15.6-1000 pg/mL
Tested applications	Quantification ELISA

Database Links

Entrez Gene	3569
SwissProt	P05231

Kit Components & Storage

Microplate - antibody coated 96-well microplate (8 well × 12 strips)	1 plate	Unopened Kit: Store at 2-8°C for 6 months or -20°C for 12 months. Opened Kit: All reagents stored at 2-8°C for 7 days. Please use a new standard for each assay.
Protein standard - 2000 pg/bottle; lyophilized*	2 bottles	
Detection antibody (100X) - 120 µL/vial	1 vial	
Streptavidin-horseradish peroxidase (HRP) (100X) - 120 µL/vial	1 vial	
Sample Diluent PT 3-ef - 30 mL/bottle. For Human serum and plasma	1 bottle	
Sample Diluent PT 4-ef - 30 mL/bottle. For Mouse/Rat serum, plasma and serum-free cell culture supernatants.	1 bottle	
Sample Diluent PT 5-ef - 30 mL/bottle. For tissue lysates.	1 bottle	
Detection Diluent - 30 mL/bottle	1 bottle	
Wash Buffer Concentrate (20X) - 30 mL/bottle	1 bottle	
Extraction Reagent - 30 mL/bottle	1 bottle	
Tetramethylbenzidine Substrate (TMB) - 12 mL/bottle	1 bottle	
Stop Solution - 12 mL/bottle	1 bottle	
Plate Cover Seals	3 pieces	

Product Description

KE00007 is a solid phase sandwich Enzyme Linked-Immuno-Sorbent Assay (Sandwich ELISA). The IL6 ELISA kit is to be used to detect and quantify protein levels of endogenous IL6. The assay recognizes human IL6. An antibody specific for IL6 has been pre-coated onto the microwells. The IL6 protein in samples is captured by the coated antibody after incubation. Following extensive washing, another antibody specific for IL6 is added to detect the captured IL6 protein. For signal development, horseradish peroxidase (HRP)-conjugated antibody is added, followed by Tetramethyl-benzidine (TMB) reagent. Solution containing sulfuric acid is used to stop color development and the color intensity which is proportional to the quantity of bound protein is measurable at 450nm with the correction wavelength set at 630 nm.

Background

Interleukin-6 (IL6) is an interleukin that acts as both a pro-inflammatory and anti-inflammatory cytokine. IL6 protein is secreted by a variety of cell types including T cells and macrophages as phosphorylated and variably glycosylated molecule. IL6 Plays an essential role in the final differentiation of B-cells into Ig-secreting cells involved in lymphocyte and monocyte differentiation. It induces myeloma and plasmacytoma growth and induces nerve cells differentiation Acts on B-cells, T-cells, hepatocytes, hematopoietic progenitor cells and cells of the CNS. IL6 is also considered a myokine, a cytokine produced from muscle, and is elevated in response to muscle contraction. IL6 has been shown to interact with interleukin-6 receptor and glycoprotein 130. Additionally, IL6 is involved in hematopoiesis, bone metabolism, and cancer progression, and has been defined an essential role in directing transition from innate to acquired immunity.

Safety Notes

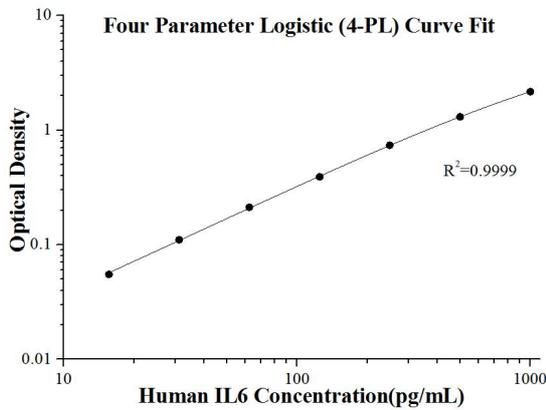
This product is sold for lab research and development use ONLY and not for use in humans or animals. Avoid any skin and eye contact with Stop Solution and TMB. In case of contact, wash thoroughly with water.

Assay Procedure Summary

Step	Reagent	Volume	Incubation	Wash	Notes
1	Standard and Samples	100 µL	120 min	4 times	Cover Wells incubate at 37°C
2	Diluent Antibody Solution	100 µL	60 min	4 times	Cover Wells incubate at 37°C
3	Diluent HRP Solution	100 µL	40 min	4 times	Cover Wells incubate at 37°C
4	TMB Substrate	100 µL	15-20 min	Do not wash	Incubate in the dark at 37°C
5	Stop Solution	100 µL	0 min	Do not wash	-
6	Read plate at 450 nm and 630 nm immediately after adding Stop solution. DO NOT exceed 5 minutes.				

Example data

These standard curves are provided for demonstration only. A standard curve should be generated for each set of samples assayed.



(pg/mL)	O.D	Average	Corrected
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Precision

Intra-assay Precision (Precision within an assay) Three samples of known concentration were tested 20 times on one plate to assess intra-assay precision.

Inter-assay Precision (Precision between assays) Three samples of known concentration were tested in 24 separate assays to assess inter-assay precision.

Intra-assay Precision				
Sample	n	Mean (pg/mL)	SD	CV%
1	20	587.3	35.0	6.0
2	20	123.0	9.9	8.1
3	20	25.3	1.9	7.7

Inter-assay Precision				
Sample	n	Mean (pg/mL)	SD	CV%
1	24	622.3	28.7	4.6
2	24	102.7	7.1	6.9
3	24	24.0	1.3	5.4