Datasheet for ABIN7014036

IL-6 ELISA Kit

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Overview

Quantity:	96 tests
Target:	IL-6 (IL6)
Reactivity:	Mouse
Method Type:	Sandwich ELISA
Detection Range:	6.25 pg/mL - 400 pg/mL
Minimum Detection Limit:	6.25 pg/mL
Application:	ELISA

Product Details

Purpose:	For quantitative detection of IL-6 in serum, plasma, tissue homogenates and other biological fluids.
Sample Type:	Plasma, Serum, Tissue Homogenate
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Specificity:	This assay has high sensitivity and excellent specificity for detection of IL -6. No significant cross-reactivity or interference between IL-6 and analogues were observed.
Sensitivity:	3.75 pg/mL
Grade:	High Sensitivity
Components:	• Pre-coated, ready to use 96-well strip plate • Plate sealer for 96 wells

Product Details

- Standard
- Sample/Standard Dilution Buffer
- Assay Diluent
- Biotin-labeled Antibody (Concentrated)
- HRP-Streptavidin (HRP-SA)
- Biotin System (BS)
- BS Dilution Buffer
- TMB Substrate
- Stop Solution
- Wash Buffer (25 x concentrate)
- Instruction manual

Target Details

Target:	IL-6 (IL6)
Alternative Name:	Interleukin 6 (IL6 Products)
Background:	Interleukin 6 (IL-6) is a pleiotropic, a-helical, 22-28 kDa phosphorylated and variably glycosylated cytokine that plays important roles in the acute phase reaction, inflammation, hematopoiesis, bone metabolism, and cancer progression. IL-6, along with TNF-a and IL-1, drives the acute inflammatory response. IL-6 is almost solely responsible for fever and the acute phase response in the liver, and it is important in the transition from acute inflammation to either acquired immunity or chronic inflammatory disease. Cells known to express IL-6 include CD8+ T cells, fibroblasts, synoviocytes, adipocytes, osteoblasts, megakaryocytes, endothelial cells (under the influence of endothelins), sympathetic neurons, cerebral cortex neurons, adrenal medulla chromaffin cells, retinal pigment cells, mast cells, keratinocytes, Langerhans cells, fetal and adult astrocytes, neutrophils, monocytes, eosinophils, colonic epithelial cells, and pancreatic islet beta cells. IL -6 production is generally correlated with cell activation and is normally kept in control by glucocorticoids, catecholamines, and secondary sex steroids. Normal human circulating IL -6 is in the 1 pg/mL ranges, with slight elevations during the menstrual cycle, modest elevations in certain cancers, and large elevations after surgery.
Pathways:	TLR Signaling, Hormone Transport, Negative Regulation of Hormone Secretion, Myometrial Relaxation and Contraction, Positive Regulation of Immune Effector Process, Production of Molecular Mediator of Immune Response, Regulation of Carbohydrate Metabolic Process, Autophagy, Cell RedoxHomeostasis, Cancer Immune Checkpoints, Inflammasome

Application Details

Sample Volume:	50 µL
Plate:	Pre-coated
Protocol:	1. Prepare all reagents, samples and standards, 2. Add 50µL Assay Diluent to each well 3. Add 50µL standard or sample to each well. Incubate 90 minutes at 37 °C, 4. Aspirate and wash 2 times, 5. Add 100µL Biotin-labeled antibody to each well. Incubate 1 hour at 37 °C, 6. Aspirate and wash 2 times, 7. Add 100µL BS Working Solution to each well. Incubate 15 minutes at RT, 8. Aspirate and wash 3 times, 9. Add 100µL HRP-SA to each well. Incubate 30 minutes at 37 °C, 10. Aspirate and wash 3 times, 11. Add 90µL Substrate Solution. Incubate 10-20 minutes at 37 °C, 12. Add 50µL Stop Solution. Read at 450nm immediately.
Reagent Preparation:	Bring all reagents and samples to room temperature for 20 minutes before use. 1. Wash Buffer: Dilute 30 mL Concentrated Wash Buffer to 750 mL Wash Buffer with deionized or distilled water. Put unused solution back at 2-8 °C. Note: If crystals have formed in the concentrate, you can warm it with 40 °C water bath (Heating temperature should not exceed 50 °C) and mix it gently until the crystals have completely been dissolved. The solution should be cooled to room temperature before use. 2. Standards: a) Add 1 mL Sample Dilution Buffer into one Standard tube (labeled as zero tube), keep the tube at room temperature for 10 minutes and mix them thoroughly. Note: If the standard tube concentration higher than the range of the kit, please dilute it and label as zero tube. b) Label 7 EP tubes with 1/2, 1/4, 1/8, 1/16, 1/32, 1/64 and blank respectively. Add 0.3 mL of the Sample Dilution Buffer into each tube. Add 0.3 mL of the above Standard solution (from zero tube) into 1st tube and mix them thoroughly. Transfer 0.3 mL from 1st tube to 2nd tube and mix them thoroughly, and so on. Sample Dilution Buffer is used for the blank control. Note: It is best to use Standard Solutions within 2 hours. 3. BS Working Solution: Prepare it within 15 minutes before experiment. a) Calculate required total volume of the working solution: 0.1 mL/well x quantity of wells. (Allow 0.1-0.2 mL more than the total volume.) b)Dilute the BS with BS Dilution Buffer at 1:100 and mix them thoroughly. (i.e. Add 1 µL of BS into 99 µL of BS Dilution Buffer.) Note: If crystals have formed in the BS, you can warm it with water (temperature should not exceed 30 °C) and mix it gently until the crystals have completely been dissolved.
Sample Preparation:	• It is recommended to use fresh samples without long storage, otherwise protein degradation and denaturationmay occur in these samples, leading to false results. Samples should therefore be stored for a short periodat 2 - 8 °C or aliquoted at -20 °C (≤1 month) or -80 °C (≤

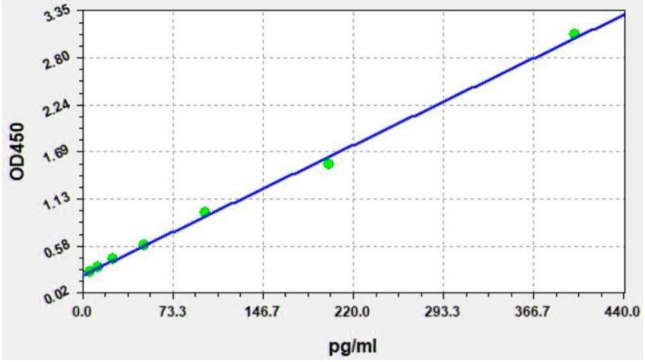
Application Details

	3 months). Repeated freeze-thawcycles should be avoided. Prior to assay, the frozen samples should be slowly thawed and centrifuged toremove precipitates. • If the sample type is not specified in the instructions, a preliminary test is necessary to determinecompatibility with the kit. • If a lysis buffer is used to prepare tissue homogenates or cell culture supernatant, there is a possibilityof causing a deviation due to the introduced chemical substance.The recommended dilution factor is for reference only. • Please estimate the concentration of the samples before performing the test. If the values are not in therange of the standard curve, the optimal sample dilution for the particular experiment has to be determined.Samples should then be diluted with PBS (pH =7.0-7.2).
Assay Precision:	Intra-Assay: CV<8% Inter-Assay: CV<10%
Restrictions:	For Research Use only

Handling

Storage:	4 °C,-20 °C
Storage Comment:	1. For unopened kit: All reagents should be stored according to the labels on the vials. The Standard and 96-well Strip Plate should be stored at -20 °C upon receipt, while the other reagents should be stored at 4 °C. 2. For opened kits: the remaining reagents must be stored according to the above storage conditions. In addition, please return the unused wells to the foil pouch containing the desiccant and seal the foil pouch with the zipper.
Expiry Date:	6 months

Images



ELISA

Image 1. Typical standard curve