Datasheet for ABIN1112640

IL1R1 ELISA Kit

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Overview

Quantity:	96 tests
Target:	IL1R1
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	31.2-2000 pg/mL
Minimum Detection Limit:	31.2 pg/mL
Application:	ELISA

Product Details

Purpose:	For quantitative detection of IL-1RA in human serum, plasma, body fluids, tissue lysates or cell culture supernatants.
Sample Type:	Cell Culture Supernatant, Plasma, Serum, Tissue Lysate
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Sensitivity:	< 2 pg/mL
Components:	1. One 96-well plate pre-coated with anti-human IL-1RA antibody 2. Lyophilized human IL-1RA standards: 2 tubes (10ng / tube) 3. Sample / Standard diluent buffer: 30ml 4. Biotin conjugated anti-human IL-1RA antibody (Concentrated): 130 µl.
Material not included:	1. 37 °C incubator 2. Microplate reader (wavelength: 450nm) 3. Precise pipette and disposable pipette tips 4. Automated plate washer 5. ELISA shaker 6. 1.5ml of Eppendorf tubes 7. Plate cover 8. Absorbent filter papers 9. Plastic or glass container with volume of above 1L

Target Details

Target:	IL1R1
Alternative Name:	IL-1 R alpha (IL1R1 Products)
Background:	The interleukin-1 receptor antagonist (IL-1RA) is a protein that in humans is encoded by the IL1RN gene which maps to 2q14.2. It is a member of the interleukin 1 cytokine family, and it is secreted by various types of cells including immune cells, epithelial cells, and adipocytes, IL-1RA is an agent that binds non-productively to the cell surface interleukin-1 receptor (IL-1R). Carter et al. (1990) found that IL1RN specifically inhibited IL1 bioactivity on T cells and endothelial cells in vitro and was a potent inhibitor of IL1-induced corticosterone production in vivo. Mutations in the IL1RN gene results in a rare disease called deficiency of the interleukin-1–receptor antagonist (DIRA), and elevated levels of IL1RN has been found in serum of schizophrenia patients.
Pathways:	NF-kappaB Signaling, Carbohydrate Homeostasis, Cancer Immune Checkpoints

Application Details

Comment:	This kit was based on sandwich enzyme-linked immune-sorbent assay technology. Anti- IL-1RA polyclonal antibody was pre-coated onto 96-well plates. And the biotin conjugated anti- IL-1RA polyclonal antibody was used as detection antibodies. The standards test samples and biotin conjugated detection antibody were added - the wells subsequently and wash with wash buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with wash buffer. TMB substrates were used - visualize HRP enzymatic reaction. TMB was catalyzed by HRP - produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional - the IL-1RA amount of sample captured in plate. Read the O.D. absorbance at 450 nm in a microplate reader and then the concentration of IL-1RA can be calculated.
Plate:	Pre-coated
Reagent Preparation:	1. Before the experiment, centrifuge each kit component for several minutes to bring down all reagents to the bottom of tubes. 2. It is recommend to measure each standard and sample in duplicate. 3. Do NOT let the plate completely dry at any time! Since the dry condition can inactivate the biological material on the plate. 4. Do not reuse pipette tips and tubes to avoid cross contamination. 5. Do not use the expired components and the components from different batches. 6. To avoid the marginal effect of plate incubation for temperature differences (the marginal wells always get stronger reaction), it is recommend to equilibrate the ABC working solution and TMB substrate for at least 30 min at room temperature (37°C) before adding to

Application Details

	wells.The TMB substrate (Kit Component 8) is colorless and transparent before use, if not, please contact us for replacement.
Sample Preparation:	Preparation of sample and reagents 1. Sample Isolate the test samples soon after collecting, then, analyze immediately (within 2 hours). Or aliquot and store at -20 °C for long term. Avoid multiple freeze-thaw cycles. Tissue lysate, body fluids and cell culture supernatants: Centrifuge to remove precipitate, analyze immediately or aliquot and store at -20 °C . Serum: Coagulate the serum at room temperature (about 4 hours). Centrifuge at approximately 1000 × g for 15 min. Analyze the serum immediately or aliquot and store at -20 °C . Plasma: Collect plasma with citrate, heparin or EDTA as the anticoagulant. Centrifuge for 15 min at 1500 x g within 30 min of collection. For eliminating the platelet effect, suggesting that further centrifugation for 10 min at 2-8°C at 10000 x g. Analyze immediately or aliquot and store frozen at -20 °C. Note: 1. Coagulate blood samples completely, then, centrifuge, and avoid hemolysis and particle. 2. NaN_3 can not be used as test sample preservative, since it is the inhibitor for HRP.
Restrictions:	For Research Use only

Handling

Preservative:	Sodium azide, Thimerosal (Merthiolate)