Datasheet for ABIN1112614

GDNF ELISA Kit

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Overview

Quantity:	96 tests
Target:	GDNF
Reactivity:	Rat
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 GDNF in rat serum, body fluids, tissue lysates or cell culture supernatants.
Sample Type:	Cell Culture Supernatant, Serum, Tissue Lysate
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Sensitivity:	< 4 pg/mL
Components:	1. One 96-well plate pre-coated with anti-Rat GDNF antibody 2. Lyophilized Rat GDNF standards: 2 tubes (10ng / tube) 3. Sample / Standard diluent buffer: 30ml 4. Biotin conjugated anti-Rat GDNF 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:	GDNF
Alternative Name:	GDNF (GDNF Products)
Background:	Glial cell-derived neurotrophic factor, also known as GDNF, is a founding member of the GDNF family of ligands (GFL). In Rats, it is encoded by the GDNF gene. This gene mapped to 5p13.3-p13.1. Mutations in this gene may be associated with Hirschsprung's disease. GDNF is a small protein that potently promotes the survival of many types of neurons. The most prominent feature of GDNF is its ability to support the survival of dopaminergic and motorneurons. It promotes the survival and differentiation of dopaminergic neurons in culture, and was able to prevent apoptosis of motor neurons induced by axotomy. It also regulates kidney development and spermatogenesis, and it affects alcohol consumption.
Pathways:	RTK Signaling, Synaptic Membrane, Tube Formation, Autophagy, Smooth Muscle Cell Migration

Application Details

Comment:	This kit was based on sandwich enzyme-linked immune-sorbent assay technology. Anti-GDNF polyclonal antibody was pre-coated onto 96-well plates. And the biotin conjugated anti-GDNF 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 GDNF amount of sample captured in plate. Read the O.D. absorbance at 450 nm in a microplate reader and then the concentration of GDNF 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 wells.The TMB substrate (Kit Component 8) is colorless and transparent before use, if not,

Application Details

	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. Body fluids, tissue lysates 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 1500 × g for 15 min. Analyze the serum immediately or aliquot and store at -20 °C . Note: 1. Coagulate blood samples completely, then, centrifuge, and avoid hemolysis and particle. 2. NaN3 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)