

## Datasheet for ABIN1112693 **TRKA ELISA Kit**



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### Overview

Quantity:	96 tests
Target:	TRKA (NTRK1)
Reactivity:	Rat
Method Type:	Sandwich ELISA
Detection Range:	156-10000 pg/mL
Minimum Detection Limit:	156 pg/mL
Application:	ELISA

### Product Details

Purpose:	For quantitative detection of TrkA in rat serum, plasma, body fluids, tissue lysates or cell culture supernates.
Sample Type:	Cell Culture Supernatant, Plasma, Serum, Tissue Lysate
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Sensitivity:	< 10 pg/mL
Components:	1. One 96-well plate pre-coated with anti-Rat TrkA antibody 2. Lyophilized Rat TrkA standards: 2 tubes (10ng / tube) 3. Sample / Standard diluent buffer: 30ml 4. Biotin conjugated anti-Rat TrkA 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

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Target: TRKA (NTRK1)

Alternative Name: TRK A ([NTRK1 Products](#))

Background: Trk-A, also known as neurotrophic tyrosine kinase receptor type 1 is a protein that in humans is encoded by the NTRK1 gene. It is a member of the neurotrophic tyrosine kinase receptor (NTRK) family. This kinase is a membrane-bound receptor that, upon neurotrophin binding, phosphorylates itself (autophosphorylation) and members of the MAPK pathway. TrkA is the high affinity catalytic receptor for the neurotrophin, Nerve Growth Factor. While TrkA mediates the effects of NGF, TrkB is bound and activated by BDNF, NT-4, and NT-3. Further, TrkC binds and is activated by NT-3.

Pathways: [RTK Signaling](#), [Neurotrophin Signaling Pathway](#), [cAMP Metabolic Process](#)

## Application Details

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Comment: This kit was based on sandwich enzyme-linked immune-sorbent assay technology. Anti-TrkA polyclonal antibody was pre-coated onto 96-well plates. And the biotin conjugated anti-TrkA 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 TrkA amount of sample captured in plate. Read the O.D. absorbance at 450 nm in a microplate reader and then the concentration of TrkA 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, please contact us for replacement.

## Application Details

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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 or cell culture supernate: 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 2000 × g for 15 min. Analyze the serum immediately or aliquot and store at -20 °C .

Plasma: Collect plasma with heparin or EDTA as the anticoagulant. Centrifuge for 20 min at 2000 x g within 30 min of collection. Analyze immediately or aliquot and store frozen at -20 °C. citrate can not be used as anticoagulant here. Note: 1. Coagulate blood samples completely, then, centrifuge, and avoid hemolysis and particle. 2. NaN<sub>3</sub> can not be used as test sample preservative, since it is the inhibitor for HRP.

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Restrictions: For Research Use only

## Handling

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Preservative: Sodium azide, Thimerosal (Merthiolate)