



## Product Information Sheet

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### Mouse trkB ELISA Kit

<b>Catalog No.</b>	EK0849
<b>Size</b>	96T
<b>Range</b>	93.8pg/ml-6000pg/ml
<b>Sensitivity</b>	< 5 pg/ml

#### Specificity

No detectable cross-reactivity with any other cytokine.

#### Storage

Store at 4°C for frequent use, at -20°C for infrequent use.

Avoid multiple freeze-thaw cycles (Shipped with wet ice.)

#### Expiration

Four months at 4°C and eight months at -20°C.

#### Application

For quantitative detection of mouse TrkB in tissue lysates or cell culture supernates.

The significance of detection in sera, plasma, body fluids is undetermined.

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#### Principle

Mouse TrkB ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. Mouse TrkB specific polyclonal antibodies were precoated onto 96-well plates. The mouse specific detection polyclonal antibodies were biotinylated. The test samples and biotinylated detection antibodies were added to the wells subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the mouse TrkB amount of sample captured in plate.

#### Kit Components

1. Lyophilized recombinant mouse TrkB standard: 10ng/tubex2.
2. One 96-well plate precoated with anti- mouse TrkB antibody.
3. Sample diluent buffer: 30 ml
4. Biotinylated anti- mouse TrkB antibody : 130µl, dilution 1:100.
5. Antibody diluent buffer: 12ml.
6. Avidin-Biotin-Peroxidase Complex (ABC) : 130µl, dilution 1:100.
7. ABC diluent buffer: 12ml.
8. TMB color developing agent: 10ml.
9. TMB stop solution: 10ml.

#### Material Required But Not Provided

1. Microplate reader in standard size and Automated plate washer.
2. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended if there is a large amount of samples.
3. Clean tubes and Eppendorf tubes.
4. Washing buffer (neutral PBS or TBS).

Preparation of 0.01M **TBS**: Add 1.2g Tris, 8.5g NaCl; 450µl of purified acetic acid or 700µl of concentrated hydrochloric acid to 1000ml H<sub>2</sub>O and adjust pH to 7.2-7.6. Finally, adjust the total volume to 1L.

Preparation of 0.01 M **PBS**: Add 8.5g sodium chloride, 1.4g Na<sub>2</sub>HPO<sub>4</sub> and 0.2g NaH<sub>2</sub>PO<sub>4</sub> to 1000ml distilled water and adjust pH to 7.2-7.6. Finally, adjust the total volume to 1L.

**FOR RESEARCH USE ONLY. NOT FOR DIAGNOSTIC AND CLINICAL USE.**

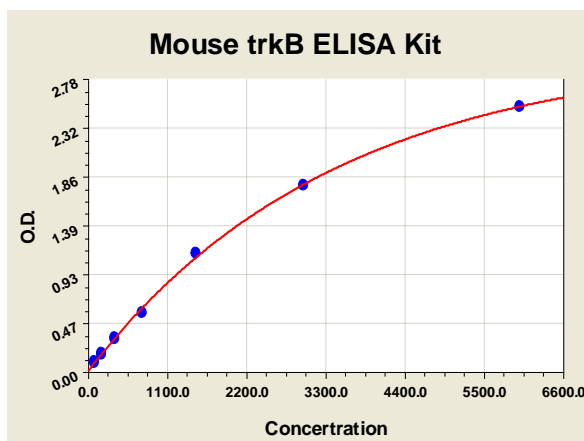
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## **Notice for Application of Kit**

1. Before using Kit, spin tubes and bring down all components to bottom of tube.
2. Duplicate well assay was recommended for both standard and sample testing.
3. Don't let 96-well plate dry, dry plate will inactivate active components on plate.
4. In order to avoid marginal effect of plate incubation due to temperature difference ( reaction may be stronger in the marginal wells), it is suggested that the diluted ABC and TMB solution will be pre-warmed in 37°C for 30 min before using.

## **Mouse TrkB ELISA Kit-1X96 Well Plate Image**



## **Background**

TrkB receptor also known as TrkB tyrosine kinase or BDNF/NT-3 growth factors receptor or neurotrophic tyrosine kinase, receptor, type 2 is a protein that in humans is encoded by the *NTRK2* gene.<sup>[1]</sup> TrkB is the high affinity catalytic receptor for several "neurotrophins", which are small protein growth factors that induce the survival and differentiation of distinct cell populations. The TrkB receptor is part of the large family of receptor tyrosine kinases. A "tyrosine kinase" is an enzyme which is capable of adding a phosphate group to certain tyrosines on target proteins, or "substrates". Soppet et al. [2] demonstrated that the gp145 gene product of the TRKB gene is rapidly phosphorylated on tyrosine residues upon exposure to BDNF and NTF3. The standard product used in this kit is recombinant TrkB, a 49.5KDa glycoprotein, C32—H439.

## **Reference**

1. Nakagawara A, Liu XG, Ikegaki N, White PS, Yamashiro DJ, Nycum LM, Biegel JA, Brodeur GM (January 1995). "Cloning and chromosomal localization of the human TRK-B tyrosine kinase receptor gene (NTRK2)". *Genomics* 25 (2): 538–46.
2. Soppet, D., Escandon, E., Maragos, J., Middlemas, D. S., Reid, S. W., Blair, J., Burton, L. E., Stanton, B. R., Kaplan, D. R., Hunter, T., Nikolics, K., Parada, L. F. The neurotrophic factors brain-derived neurotrophic factor and neurotrophin-3 are ligands for the trkB tyrosine kinase receptor. *Cell* 65: 895-903, 1991.