



# **IMMUNOLOGICAL SCIENCES**

## **Product Data Sheet**

IK-10147  
IK-10147A

### **Mouse NGF ELISA Kit, 96 Tests** **Mouse NGF ELISA Kit, 4 x 96 Tests**

<b>Range</b>	31.2pg/ml-2000pg/ml
<b>Sensitivity</b>	< 1pg/ml
<b>Specificity</b>	No detectable cross-reactivity with BDGF, GDNF, CNTF, NT3 and NT4.
<b>Storage</b>	Store at 4°C for frequent use, at -20°C for infrequent use. Avoid multiple freeze-thaw cycles (Shipped with wet ice.)
<b>Expiration</b>	Four months at 4°C and eight months at -20°C.
<b>Application</b>	For quantitative detection of mouse NGF in sera, plasma, body fluids, tissue lysates or cell culture supernates.

**Principle** Mouse NGF ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. Mouse NGF specific-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 NGF amount of sample captured in plate.

#### **Kit Components**

1. Lyophilized recombinant mouse NGF standard: 10ng/tube×2.
2. One 96-well plate precoated with anti-mouse NGF antibody.
3. Sample diluent buffer: 30 ml
4. Biotinylated anti- mouse NGF 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.
2. Automated plate washer.
3. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection.
4. Clean tubes and Eppendorf tubes.
5. 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.

#### **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.

**For Research use only; not for use as a diagnostic**

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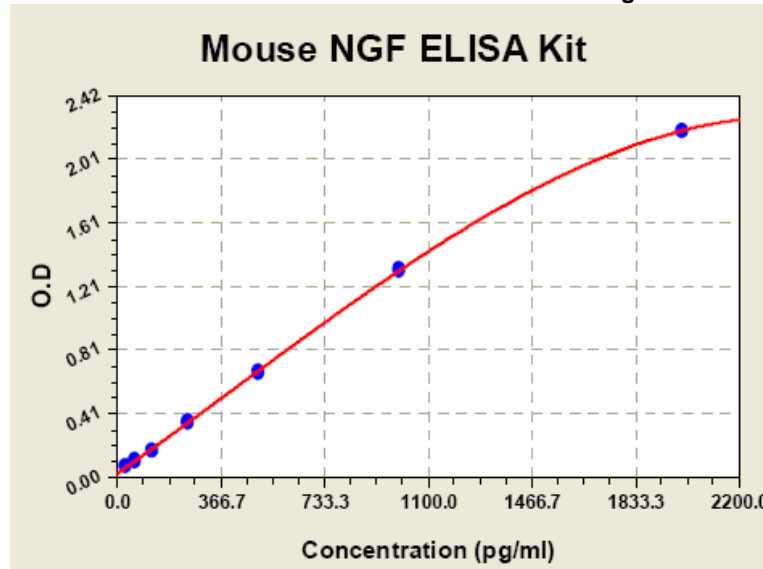
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Mouse NGF ELISA Kit-1X96 Well Plate Image



### **Background**

Nerve growth factor (NGF) is a polypeptide involved in the regulation of growth and differentiation of sympathetic and certain sensory neurons. NGF is thought to have a profound effect on the development and maintenance of sympathetic and embryonic sensory neurones. NGF activity isolated from the male mouse submaxillary gland (MSG) consists of three types of subunits, alpha, beta and gamma, which specifically interact to form a 7S, approximately 130,000-molecular weight (Mr) complex. The 7S complex contains two identical 118-amino acid beta-chains, which are solely responsible for the nerve growth-stimulating activity of NGF.<sup>1</sup> NGF, which is expressed by inflammatory cells and effects changes that lead to increased neural responsiveness, could be a pivotal mediator in allergic rhinitis.<sup>2</sup> The standard product used in this kit is mouse 2.5S NGF, which is a dimer linking with two polypeptide chains of 120 amino acids.

### **Reference**

1. Ullrich, A.; Gray, A.; Berman, C.; Dull, T. J. Human beta-nerve growth factor gene sequence highly homologous to that of mouse. *Nature* 303: 821-825, 1983.
2. Sanico, A. M.; Stanisz, A. M.; Gleeson, T. D.; Bora, S.; Proud, D.; Bienenstock, J.; Koliatsos, V. E.; Togias, A. Nerve growth factor expression and release in allergic inflammatory disease of the upper airways. *Am. J. Resp. Crit. Care Med.* 161: 1631-1635, 2000.

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