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Datasheet for ABIN411337

Nerve Growth Factor ELISA Kit

1 Image

9 Publications

Overview

Quantity:	96 tests
Target:	Nerve Growth Factor (NGF)
Binding Specificity:	AA 122-241
Reactivity:	Rat
Method Type:	Sandwich ELISA
Detection Range:	15.6-1000 pg/mL
Minimum Detection Limit:	15.6 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Rat NGF/NGF beta
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: S122-G241
Specificity:	Expression system for standard: NSO Immunogen sequence: S122-G241
Cross-Reactivity (Details):	There is no detectable cross-reactivity with BDNF, GDNF, CNTF, NT3, and NT4.

Product Details

Sensitivity: <1pg/mL

Material not included: Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g NaCl

Target Details

Target: Nerve Growth Factor (NGF)

Alternative Name: NGF ([NGF Products](#))

Background: Protein Function: Nerve growth factor is important for the development and maintenance of the sympathetic and sensory nervous systems. Extracellular ligand for the NTRK1 and NGFR receptors, activates cellular signaling cascades through those receptor tyrosine kinase to regulate neuronal proliferation, differentiation and survival. Inhibits metalloproteinase dependent proteolysis of platelet glycoprotein VI. .

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. NGF, which is expressed by inflammatory cells and effects changes that lead to increased neural responsiveness, could be a pivotal mediator in allergic rhinitis.

Synonyms: Beta-nerve growth factor,Beta-NGF,Ngf,Ngfb,

Full Gene Name: Beta-nerve growth factor

Cellular Localisation: Secreted.

Gene ID: 310738

UniProt: [P25427](#)

Pathways: [Regulation of Cell Size](#)

Application Details

Application Notes: Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing.

Application Details

Comment:	Sequence similarities: Belongs to the NGF-beta family.
Plate:	Pre-coated
Protocol:	rat NGF ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for NGF has been precoated onto 96-well plates. Standards(NSO, S122-G241) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for NGF is added 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 rat NGF amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL, 31.2pg/mL, 15.6pg/mL rat NGF standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of rat cell culture supernatants or serum to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each rat NGF standard solution and each sample be measured in duplicate.
Assay Precision:	<ul style="list-style-type: none">• Sample 1: n=16, Mean(pg/ml): 84, Standard deviation: 4.62, CV(%): 5.5• Sample 2: n=16, Mean(pg/ml): 366, Standard deviation: 16.84, CV(%): 4.6• Sample 3: n=16, Mean(pg/ml): 628, Standard deviation: 37.68, CV(%): 6,• Sample 1: n=24, Mean(pg/ml): 117, Standard deviation: 6.9, CV(%): 5.9• Sample 2: n=24, Mean(pg/ml): 396, Standard deviation: 20.2, CV(%): 5.1• Sample 3: n=24, Mean(pg/ml): 735, Standard deviation: 52.92, CV(%): 7.2
Restrictions:	For Research Use only

Handling

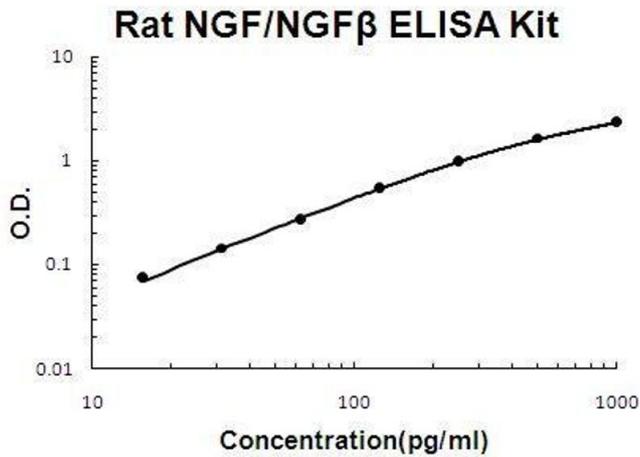
Handling Advice:	Avoid multiple freeze-thaw cycles.
Storage:	-20 °C,4 °C
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles
Expiry Date:	12 months

Publications

Product cited in: Mern, Fontana, Beierfuß, Thomé, Hegewald et al.: "A combinatorial relative mass value

evaluation of endogenous bioactive proteins in three-dimensional cultured nucleus pulposus cells of herniated intervertebral discs: identification of potential ..." in **PLoS ONE**, Vol. 8, Issue 11, pp. e81467, (2013) ([PubMed](#)).

There are more publications referencing this product on: [Product page](#)



ELISA

Image 1. Rat NGF/NGF beta PicoKine ELISA Kit standard curve