

Datasheet for ABIN624954

NGFB ELISA Kit**1** Image **10** Publications[Go to Product page](#)

Overview

Quantity: 96 tests

Target: NGFB

Reactivity: Human

Method Type: Sandwich ELISA

Detection Range: 14-5000 pg/mL

Minimum Detection Limit: 14 pg/mL

Application: ELISA

Product Details

Purpose: Human beta-NGF ELISA Kit for cell culture supernatants, plasma, and serum samples.

Sample Type: Plasma, Cell Culture Supernatant, Serum

Analytical Method: Quantitative

Detection Method: Colorimetric

Specificity: This ELISA kit shows no cross-reactivity with the following cytokines tested: human Angiogenin, BDNF, BLC, ENA-78, FGF- 4, IL-1 alpha, IL-1 beta, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11, IL-12 p70, IL-12 p40, IL-13, IL-15, I-309, IP-10, G-CSF, GM-CSF, IFN-gamma, Leptin (OB), MCP-1, MCP-3, MDC, MIP-1 alpha, MIP-1 beta, MIP-1 delta, MMP-1, - 2, -3, -10, PARC, RANTES, SCF, TARC, TGF-beta, TIMP-1, TIMP-2, TNF-alpha, TNF-beta, TPO, VEGF

Sensitivity: < 14 pg/mL

Characteristics:

- Strip plates and additional reagents allow for use in multiple experiments

Product Details

- Quantitative protein detection
- Establishes normal range
- The best products for confirmation of antibody array data

- Components:
- Pre-Coated 96-well Strip Microplate
 - Wash Buffer
 - Stop Solution
 - Assay Diluent(s)
 - Lyophilized Standard
 - Biotinylated Detection Antibody
 - Streptavidin-Conjugated HRP
 - TMB One-Step Substrate

- Material not included:
- Distilled or deionized water
 - Precision pipettes to deliver 2 μ L to 1 μ L volumes
 - Adjustable 1-25 μ L pipettes for reagent preparation
 - 100 μ L and 1 liter graduated cylinders
 - Tubes to prepare standard and sample dilutions
 - Absorbent paper
 - Microplate reader capable of measuring absorbance at 450nm
 - Log-log graph paper or computer and software for ELISA data analysis

Target Details

Target: NGFB

Alternative Name: beta-NGF ([NGFB Products](#))

Background: The Human beta-NGF (beta-nerve growth factor) ELISA (Enzyme-Linked Immunosorbent Assay) kit is an in vitro enzyme-linked immunosorbent assay for the quantitative measurement of human beta-NGF in serum, plasma, cell culture supernatants and urine. This assay employs an antibody specific for human beta-NGF coated on a 96-well plate. Standards and samples are pipetted into the wells and beta-NGF present in a sample is bound to the wells by the immobilized antibody. The wells are washed and biotinylated anti-human beta-NGF antibody is added. After washing away unbound biotinylated antibody, HRP-conjugated streptavidin is pipetted to the wells. The wells are again washed, a TMB substrate solution is added to the wells and color develops in proportion to the amount of beta-NGF bound. The Stop Solution changes the color from blue to yellow, and the intensity of the color is measured at 450 nm. Reproducibility: Intra-Assay: CV<10% Inter-Assay: CV<12%.

Gene ID: 4803

6. Briefly spin the Detection Antibody vial (Item F) before use. Add 100 µL of 1x Assay Diluent into the vial to prepare a detection antibody concentrate. Pipette up and down to mix gently (the concentrate can be stored at 4 °C for 5 days). The detection antibody concentrate should be diluted 80-fold with 1x Assay Diluent and used in step 4 of Part VI Assay Procedure.

7. Briefly spin the HRP-Streptavidin concentrate vial (Item G) and pipette up and down to mix gently before use. HRP-Streptavidin concentrate should be diluted 800-fold with 1x Assay Diluent. For example: Briefly spin the vial (Item G) and pipette up and down to mix gently. Add 15 µL of HRP-Streptavidin concentrate into a tube with 12 ml 1x Assay Diluent to prepare a final 800 fold diluted HRP-Streptavidin solution (don't store the diluted solution for next day use). Mix well.

Assay Procedure:

1. Bring all reagents and samples to room temperature (18 - 25 °C) before use. It is recommended that all standards and samples be run at least in duplicate.
2. Add 100 µL of each standard (see Reagent Preparation step 2) and sample into appropriate wells. Cover well and incubate for 2.5 hours at room temperature or over night at 4 °C with gentle shaking.
3. Discard the solution and wash 4 times with 1x Wash Solution. Wash by filling each well with Wash Buffer (300 µl) using a multi-channel Pipette or autowasher. Complete removal of liquid at each step is essential to good performance. After the last wash, remove any remaining Wash Buffer by aspirating or decanting. Invert the plate and blot it against clean paper towels.
4. Add 100 µL of 1x prepared biotinylated antibody (Reagent Preparation step 6) to each well. Incubate for 1 hour at room temperature with gentle shaking.
5. Discard the solution. Repeat the wash as in step
6. Add 100 µL of prepared Streptavidin solution (see Reagent Preparation step 7) to each well. Incubate for 45 minutes at room temperature with gentle shaking.
7. Discard the solution. Repeat the wash as in step
8. Add 100 µL of TMB One-Step Substrate Reagent (Item H) to each well. Incubate for 30 minutes at room temperature in the dark with gentle shaking.
9. Add 50 µL of Stop Solution (Item I) to each well. Read at 450 nm immediately.

Calculation of Results:

Calculate the mean absorbance for each set of duplicate standards, controls and samples, and subtract the average zero standard optical density. Plot the standard curve on log-log graph paper or using Sigma plot software, with standard concentration on the x-axis and absorbance on the y-axis. Draw the best-fit straight line through the standard points.

Typical Data: These standard curves are for demonstration only. A standard curve must be run with each assay. Assay Diluent Human beta-NGF concentration (pg/mL) O D = 450 nm 0.1 1 10 1 10 100 1,000 10,000

Application Details

Sensitivity: The minimum detectable dose of beta-NGF is typically less than 14 pg/mL.

Recovery: Recovery was determined by spiking various levels of beta-NGF into normal human serum, plasma and cell culture media. Mean recoveries are as follows: Sample Type Average % Recovery Range (%) Serum 113.1 98-116 Plasma 102.8 85-117 Cell culture media 106.7 90-122

Linearity: Sample Type Serum Plasma Cell Culture Media 1:2 Average % of Expected 125.7 130.4 94 Range (%) 110-134 114-139 85-104 1:4 Average % of Expected 92.08 107.8 83 Range (%) 80-102 89-138 71-103

Reproducibility: Intra-Assay: CV<10 % Inter-Assay: CV<12 %

Assay Precision: Intra-Assay: CV< 10 % Inter-Assay: CV< 12 %

Restrictions: For Research Use only

Handling

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -20 °C

Storage Comment: The entire kit may be stored at -20°C for up to 1 year from the date of shipment. Avoid repeated freeze-thaw cycles. The kit may be stored at 4°C for up to 6 months. For extended storage, it is recommended to store at -80°C.

Expiry Date: 6 months

Publications

Product cited in: Ciftci, Ozkurkucugil, Yilmaz, Ustuner, Yavuz, Yuksekkaya, Cekmen: "Urinary nerve growth factor and a variable solifenacin dosage in patients with an overactive bladder." in: **International urogynecology journal**, Vol. 27, Issue 2, pp. 275-80, (2016) ([PubMed](#)).

Faroni, Smith, Lu, Reid: "Human Schwann-like cells derived from adipose-derived mesenchymal stem cells rapidly de-differentiate in the absence of stimulating medium." in: **The European journal of neuroscience**, Vol. 43, Issue 3, pp. 417-30, (2016) ([PubMed](#)).

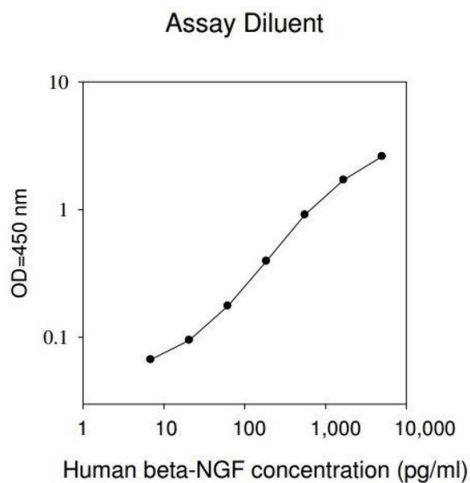
Krock, Currie, Weber, Ouellet, Stone, Rosenzweig, Haglund: "Nerve Growth Factor Is Regulated by Toll-Like Receptor 2 in Human Intervertebral Discs." in: **The Journal of biological chemistry**, Vol. 291, Issue 7, pp. 3541-51, (2016) ([PubMed](#)).

Sun, Mandai, Kamao, Hashiguchi, Shikamura, Kawamata, Sugita, Takahashi: "Protective Effects of Human iPS-Derived Retinal Pigmented Epithelial Cells in Comparison with Human Mesenchymal Stromal Cells and Human Neural Stem Cells on the Degenerating Retina in rd1 mice." in: **Stem cells (Dayton, Ohio)**, Vol. 33, Issue 5, pp. 1543-53, (2015) ([PubMed](#)).

Ferrari, Mantelli, Sacchetti, Antonangeli, Cattani, DAnniballe, Sinigaglia, Ruffini, Lambiase: "Safety and pharmacokinetics of escalating doses of human recombinant nerve growth factor eye drops in a double-masked, randomized clinical trial." in: **BioDrugs : clinical immunotherapeutics, biopharmaceuticals and gene therapy**, Vol. 28, Issue 3, pp. 275-83, (2014) ([PubMed](#)).

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

Images



ELISA

Image 1.