

# Active Neuregulin 1 (NRG1) Instruction Manual

## SBPB200Hu01

**Homo sapiens (Human)**

**Buffer Formulation**

20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.

**Traits**

Freeze-dried powder

**Purity**

> 97%

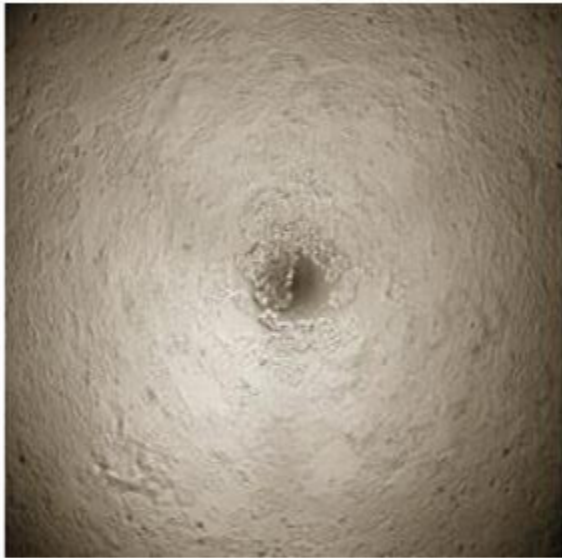
**Isoelectric Point**

9.0

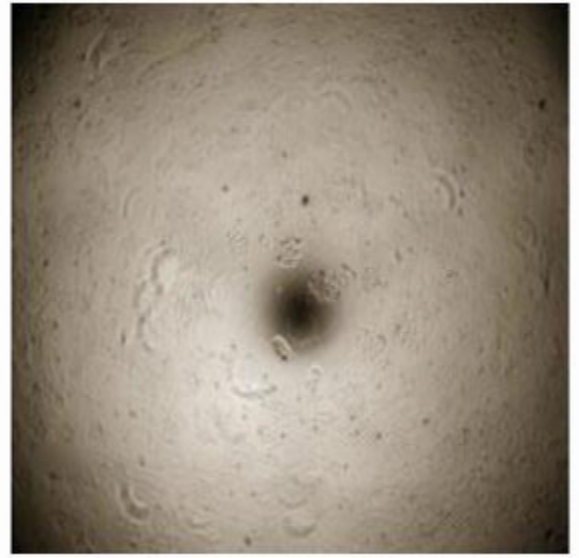
**Applications**

Cell culture; Activity Assays.

### ACTIVITY TEST



A



B

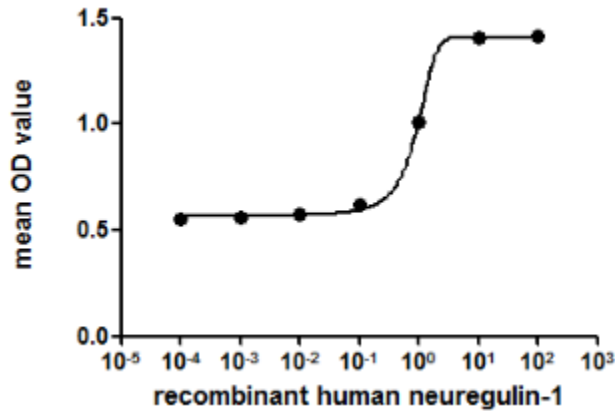
NRG1 (Neuregulin-1) is a membrane glycoprotein that belongs to the neuregulin family and act on the EGFR family of receptors. It mediates cell-cell signaling and plays a critical role in the growth and development of multiple organ systems. It is reported that by binding to HER3 receptor, NRG1 mediates downstream signaling pathways, leading to multiple effects including growth, proliferation, decreased apoptosis, cellular migration and angiogenesis. Thus, proliferation assay of NRG1 was conducted using MCF-7 cells. Briefly, MCF-7 cells were seeded into triplicate wells of 96-well plates at a density of 2,000cells/well and allowed to attach overnight, then the medium was replaced with

serum-free standard DMEM prior to the addition of various concentrations of NRG1. After incubated for 72h, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). 10 $\mu$ L of CCK-8 solution was added to each well of the plate, the absorbance at 450nm was measured using a microplate reader after incubating the plate for 1-4 hours at 37oC.

(A) MCF-7 cells cultured in DMEM, stimulated with 10ng/mL NRG1 for 72h;

(B) Unstimulated MCF-7 cells cultured in DMEM for 72h.

Figure. Cell proliferation of MCF-7 cells after stimulated with NRG1.



The dose-effect curve of NRG1 was shown in Figure 2. It was obvious that NRG1 significantly promoted cell proliferation of MCF-7 cells. The ED50 for this effect is typically 5.240 to 9.112 ng/mL.

Figure. The dose-effect curve of NRG1 on MCF-7 cells.

## USAGE

Reconstitute in 20mM Tris, 150mM NaCl (PH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

## STORAGE

Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Aliquot and store at -80°C for 12 months.

## STABILITY

The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no

obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

### Image

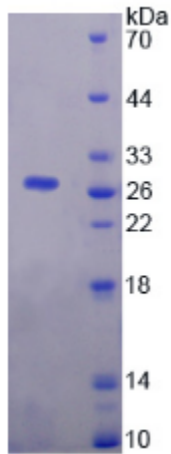


Figure. SDS-PAGE

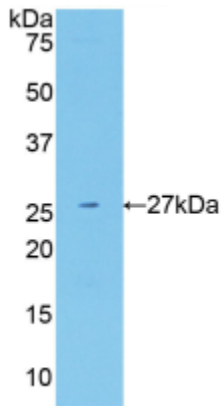


Figure. Western Blot

### **[IMPORTANT NOTE]**

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.