

APC187Hu01 100µg

Active V-Erb B2 Erythroblastic Leukemia Viral Oncogene Homolog 3 (ErbB3)

Organism Species: *Homo sapiens* (Human)

Instruction manual

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Leu709~Thr966

Tags: N-terminal His-tag

Purity: >95%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 5%Trehalose .

Original Concentration: 200µg/mL

Applications: Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 6.6

Predicted Molecular Mass: 32.6kDa

Accurate Molecular Mass: 32kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C for 12 months.

Stability Test: 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.

[**SEQUENCE**]

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LR KLKVLGSGVF GTVHKGWVIP EGESIKIPVC IKVIEDKSGR
QSFQAVTDHM LAIGSLDHAH IVRLGLCPG SSLQLVTQYL PLGSLLDHVR
QHRGALGPQL LLNKGVQIAK GMYYLEEHGM VHRNLAARNV LKSPSQVQV
ADFGVADLLP PDDKQLLYSE AKTPIKWMAL ESIHFGKYTH QSDVWSYGV
VWELMTFGAE PYAGLRLAEV PDLLEKGERL AQPQICTIDV YMVMVKCMI
DENIRPTFKE LANEFT
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[**ACTIVITY**]

V-Erb B2 Erythroblastic Leukemia Viral Oncogene Homolog 3 (ErbB3) is a member of the ErbB family of receptor tyrosine kinases. It is also known as human epidermal growth factor receptor 3 (HER3). ErbB3 plays a crucial role in various cellular processes including proliferation, differentiation, and survival. Neuregulin 1 (NRG1) is one of ligands of ErbB3, when NRG1 binds to ErbB3, it triggers dimerization and self-phosphorylation of the receptor, thereby activating downstream signaling pathways such as the PI3K/Akt and MAPK pathways. These signaling pathways are essential for cell growth and survival. Thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human ErbB3 and recombinant human NRG1. Briefly, NRG1 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to ErbB3-coated microtiter wells and incubated for 1h at 37 °C. Wells were washed with PBST and incubated for 1h with anti-NRG1 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37 °C, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50 μ L stop solution to the wells and read at 450/630 nm immediately. When

recombinant human ErbB3 is immobilized at 2 ug/mL (100 uL/well), the concentration of NRG1 that produces 50% optimal binding response is found to be approximately 0.14 ug/mL.

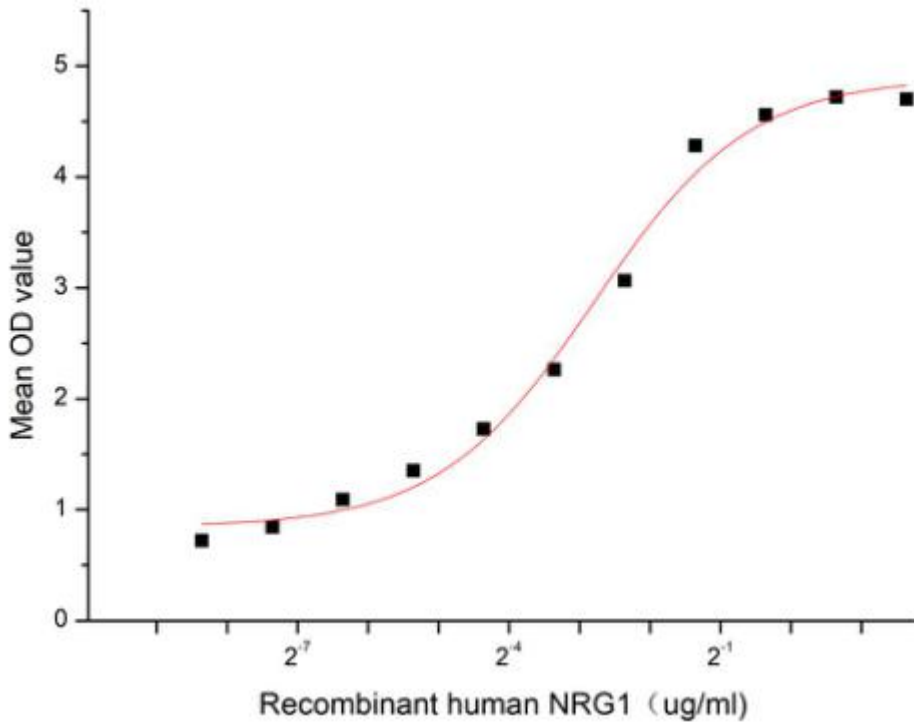


Figure 1. The binding activity of recombinant human ErbB3 and recombinant human NRG1

[**IDENTIFICATION**]

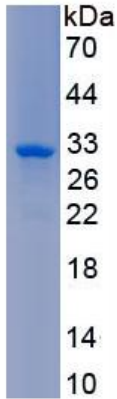


Figure 2. SDS-PAGE

Sample: Active recombinant ErbB3, Human

[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.