APC130Hu61 100μg
Active Noggin (NOG)
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: Eukaryotic expression.
Host: 293F cell
Residues: Gln28~Cys232
Tags: N-terminal His-tag
Purity: >90%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 5% Trehalose .
Original Concentration: 200μg/mL
Applications: Cell culture; Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 9.1
Predicted Molecular Mass: 24.6kDa
Accurate Molecular Mass: 33kDa as determined by SDS-PAGE reducing conditions.
Phenomenon explanation:
The possible reasons that the actual band size differs from the predicted are as follows:
1. Splice variants: Alternative splicing may create different sized proteins from the same gene.
2. Relative charge: The composition of amino acids may affects the charge of the protein.
3. Post-translational modification: Phosphorylation, glycosylation, methylation etc.
4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then cleaved to give the active form.
5. Polymerization of the target protein: Dimerization, multimerization etc.

[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]

QHY LHIRPAPSDN LPLVDLIEHP
DPIFDPKEKD LNETLLRSLL GGHYDPGFMA TSPPEDRPGG GGGAAGGAED
LAELDQLLRQ RPSGAMPSEI KGLEFSEGLA QGKKQRLSKK LRRKLQMWLW
SQTFCPVLYA WNDLGSRFWP RYVKVGSCFS KRSCSVPEGM VCKPSKSVHL
TVLRWRCQRR GGQRCGWIPI QYPIISECKC SC

[ACTIVITY]

Noggin （NOG）, a secreted glycoprotein, plays a pivotal role in embryonic development and cellular differentiation. It functions as a key antagonist of bone morphogenetic proteins (BMPs), a subgroup of the transforming growth factor-beta (TGF-β) superfamily. By binding directly to BMP ligands, NOG inhibits their interaction with cell surface receptors, thereby modulating critical signaling pathways that govern tissue patterning, and organogenesis. To test the effect of NOG on cell proliferation, U2OS cells were seeded into triplicate wells of 96-well plates and allowed to attach, replaced with various concentrations of recombinant human NOG. After incubated for 72h, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10 μl of CCK-8 solution was added to each well of the plate, then the absorbance at 450 nm was measured using a microplate reader after incubating the plate for 1-4 hours at 37 ℃. Cell viability was assessed by CCK-8 assay after incubation with

recombinant human NOG for 72h. The result was shown in Figure 1. It was obvious that NOG significantly increased cell viability of U2OS cells. The ED50 of recombinant human NOG is 0.292 μg/ml.

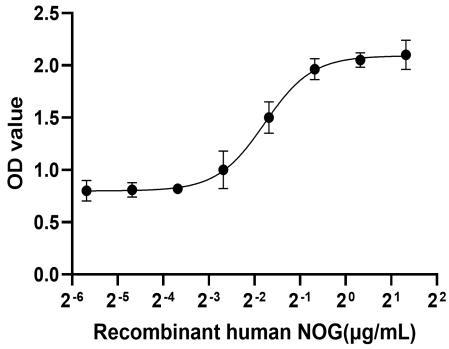

Figure1. The dose-effect curve of recombinant human NOG on U2OS cells

[IDENTIFICATION]

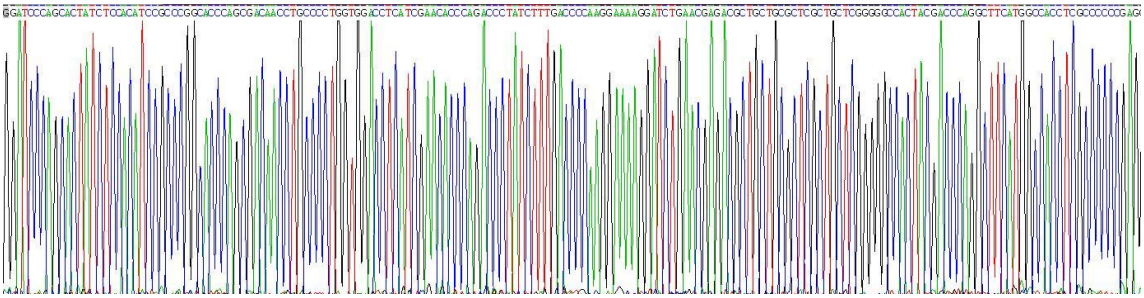

Figure 2. Gene Sequencing (extract)

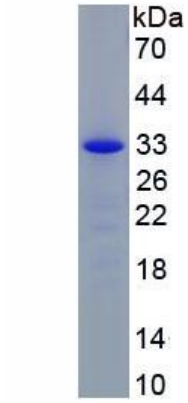

Figure 3. SDS-PAGE

Sample: Active recombinant NOG, 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.