APB463Hu01 50μg
Active Chitinase-3-like Protein 1 (CHI3L1)
Organism Species: *Homo sapiens* (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1th Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Asn112~Thr237+Ile299~Lys377

Tags: N-terminal His-tag

Purity: >98%

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

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

Applications: Cell culture; Activity Assays.

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

Predicted isoelectric point: 9.4

Predicted Molecular Mass: 26.9kDa

Accurate Molecular Mass: 26kDa 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.

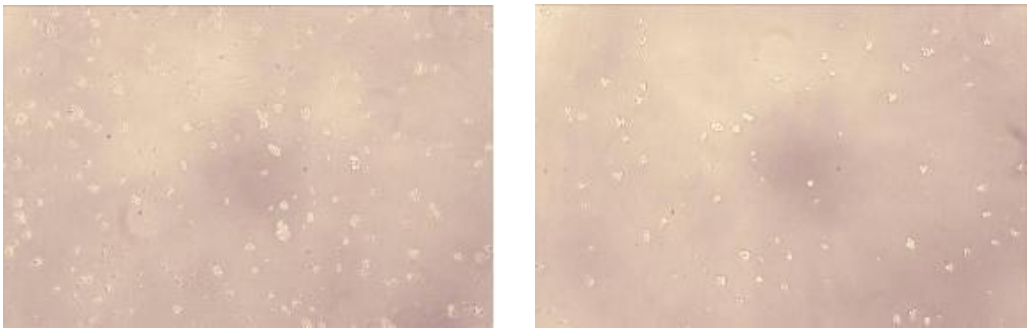
[SEQUENCE]

NTQSRRTFI KSVPPFLRTH GFDGLDLAWL YPGRRDKQHF
TTLIKEMKAE FIKEAQPGKK QLLLSAALSA GKVTIDSSYD IAKISQHLDF
ISIMTYDFHG AWRGTTGHHS PLFRGQEDAS PDRFSNT
IC
DFLRGATVHR ILGQQVPYAT KGNQWVGYDD QESVKSKVQY LKDRQLAGAM
VWALDLDDFQ GSFCGQDLRF PLTNAIK

[ACTIVITY]

Glycoprotein 39, Cartilage (GP39) also known as Chitinase-3-like protein 1 (CHI3L1) is a secreted glycoprotein that is approximately 40kDa in size that in humans is encoded by the CHI3L1 gene. GP39 plays a role in cancer cell proliferation, survival, invasiveness and in the regulation of cell-matrix interactions. To test the effect of GP39 on cell proliferation, Raji cells were seeded into triplicate wells of 96-well plates at a density of 5,000 cells/well with 1% serum standard 1640 which contains various concentrations of recombinant human GP39. After

incubated for 5 days, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10μL of CCK-8 solution was added to each well of the plate, then the absorbance at 450nm was measured using a microplate reader after incubating the plate for 1-4 hours at 37℃. Proliferation of Raji cells after incubation with GP39 for 5 days observed by inverted microscope was shown in Figure 1. Cell viability was assessed by CCK-8 (Cell Counting Kit-8) assay after incubation with recombinant GP39 for 5 days. The result was shown in Figure 2. It was obvious that GP39 significantly increased cell viability of Raji cells.



A B

Figure 1. Cell proliferation of Raji cells after stimulated with CHI3L1.

(A) Raji cells cultured in 1640, stimulated with 10ng/mL CHI3L1 for 5 days;

(B) Unstimulated Raji cells cultured in 1640 for 5 days.

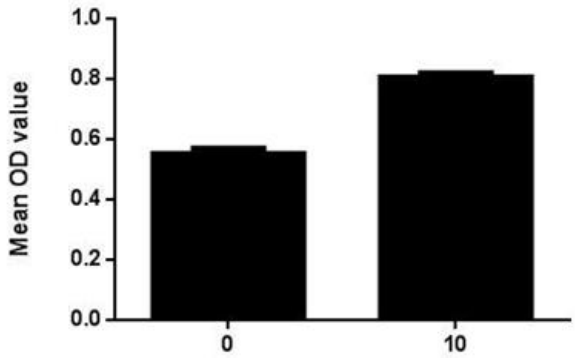


Figure 2. Cell proliferation of Raji cells after stimulated with CHI3L1(ng/ml).

[IDENTIFICATION]

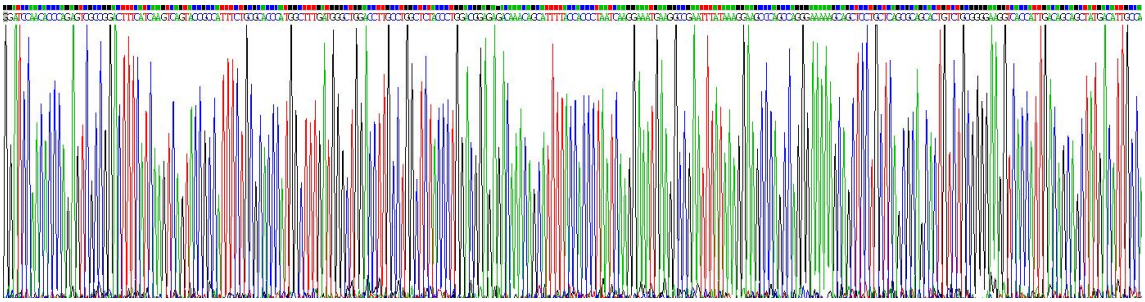


Figure 3. Gene Sequencing (extract)

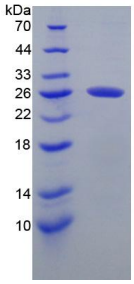


Figure 4. SDS-PAGE

Sample: Active recombinant CHI3L1, Human

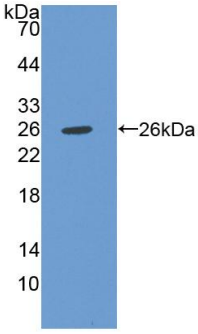


Figure 5. Western Blot

Sample: Recombinant CHI3L1, Human;

Antibody: Rabbit Anti-Human CHI3L1 Ab (PAB463Hu01)

[IMPORTANT NOTE]

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