

APA309Hu61 100µg

Active Galectin 9 (GAL9)

Organism Species: *Homo sapiens (Human)*

Instruction manual

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Eukaryotic expression.

Host: 293F cell

Residues: Met1~Thr355

Tags: N-terminal His-tag

Purity: >95%

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

Buffer Formulation: PBS, pH7.4, containing 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: 9.3

Predicted Molecular Mass: 41.2kDa

Accurate Molecular Mass: 50kDa 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 (pH7.6) 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]

```
MAFSGSQAPY LSPAVPFSGT IQGGLQDGLQ ITVNGTVLSS SGRFAVNFQ
TGFSGNDIAF HFNPRFEDGG YVVCNTRQNG SWGPEERKTH MPFQKMPFD
LCFLVQSSDF KVMVNGILFV QYFHRVPFHR VDTISVNGSV QLSYISFQNP
RTVPVQPAFS TVPFSQPVCF PPRPRGRRQK PPGVWPANPA PITQTVIHTV
QSAPGQMFST PAIPPMYPH PAYPMPFIT ILGGLYPSKS ILLSGTVLPS
AQRFHINLCS GNHIAFHLNP RFDENAVVRN TQIDNSWGSE ERS�PRKMPF
VRGQSFVSWI LCEAHCLKVA VDGQHLFEYY HRLRNLPTIN RLEVGGDIQL
THVQT
```

[ACTIVITY]

Galectin 9 (GAL9) is a member of the β -galactoside-binding galectin family. Galectin-9 is found outside of cells and may be exported by non-classical pathways. Galectin 9 exhibits a variety of biological activities, the majority of which have focused on its immunomodulatory role toward lymphocytes, where it shows specific interactions with TIM-3, and can negatively regulate Th1 type immunity. It also can agglutinate red blood. In this case, we chose rabbit erythrocyte (RaE) to assay its ability of agglutination. A general procedure for hemagglutination assay (or haemagglutination assay; HA) is as follows, two-fold dilute the recombinant human GAL9 with 0.9% sodium chloride injection, add 50 μ L a serial dilution of GAL9 to each well of a U or V-bottom shaped 96-well microtiter plate. The final well serves as a negative control with no GAL9, replace with 50 μ L 0.9% sodium chloride injection. Then add 50 μ L 1% rabbit erythrocyte to each well and mixed

gently. The plate is incubated for 3 hours at room temperature. The results were shown in Figure 1. It was obvious that the minimal effective concentration of GAL9 is 3.125 µg/mL.

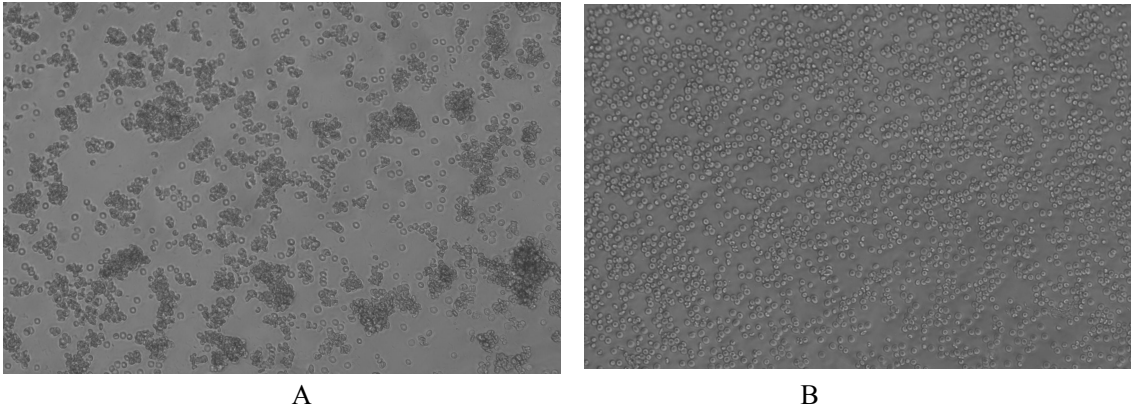


Figure 1. The hemagglutination of recombinant human GAL9
(A) Rabbit erythrocyte agglutinated by recombinant human GAL9;
(B) Rabbit erythrocyte without recombinant human GAL9.

Positive

Negative



Figure 2. The hemagglutination assay of GAL9 in V- bottom shaped 96-well microtiter plate.

[IDENTIFICATION]

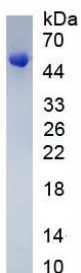


Figure 3. SDS-PAGE

Sample: Active recombinant GAL9, Human

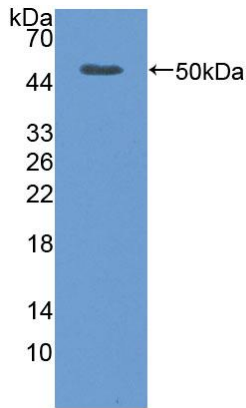


Figure 4. Western Blot

Sample: Recombinant GAL9, Human;

Antibody: Rabbit Anti-Human GAL9 Ab (PAA309Hu06)

[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.