

**APA307Ra01 100µg**

**Active Galectin 7 (GAL7)**

**Organism Species: *Rattus norvegicus* (Rat)**

***Instruction manual***

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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1st Edition (Apr, 2016)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Met1~Val128

**Tags:** N-terminal His-tag

**Purity:** >95%

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

**Buffer Formulation:** 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 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:** 6.6

**Predicted Molecular Mass:** 15.6kDa

**Accurate Molecular Mass:** 16kDa as determined by SDS-PAGE reducing conditions.

## **[ USAGE ]**

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) 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.

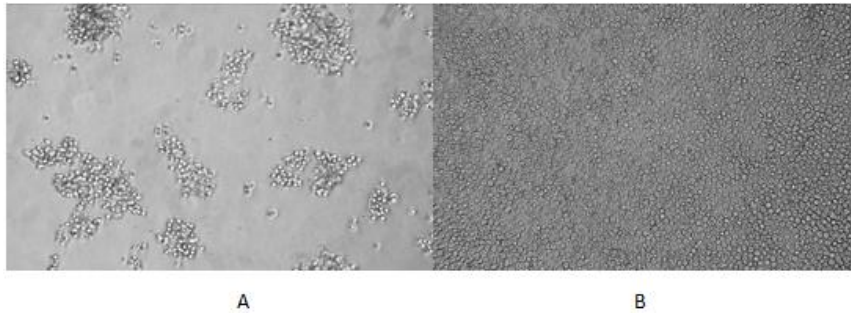
## **[ SEQUENCE ]**

```
MSATHHKTPL P QGVRLGTVM RIRGVVPDQA GRFHVNLLCG EEQEADAALH  
FNPRLDTSEV VFNTKQQGKW GREERGTGIP FQRGQPFEVL IITTEEGFKT  
VIGDDEYLHF HHRMPSSNVR SVEVGGDV
```

## **[ ACTIVITY ]**

The galectins constitute a large family of carbohydrate-binding proteins with specificity for N-acetyl-lactosamine-containing glycoproteins. At least 14 mammalian galectins, which share structural similarities in their carbohydrate recognition domains (CRD), have been identified. The galectins have been classified into the prototype galectins (-1, -2, -5, -7, -10, -11, -13, -14), which contain one CRD and exist either as a monomer or a noncovalent homodimer; the chimera galectins (Galectin-3) containing one CRD linked to a nonlectin domain; and the tandem-repeat galectins (-4, -6, -8, -9, -12) consisting of two CRDs joined by a linker peptide. Galectin-7 may also be involved in cell-cell and cell-matrix interactions and exogenous galectin has been found to accelerate the re-epithelialization of wounds. It 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 Ra GAL7 with 0.9% sodium chloride injection, add 50µL a serial dilution of GAL7 to each well of a U or V-bottom shaped 96-well microtiter plate. The final well serves as a negative control with no GAL7, replace with 50µL 0.9% sodium chloride injection. Then add 50µL 1% rabbit erythrocyte to each well and mixed gently. The plate is incubated for 3 hours at room temperature. The results are shown in Figure 1. It was obvious that the minimal

effective concentration of GAL7 is 25 µg/mL.



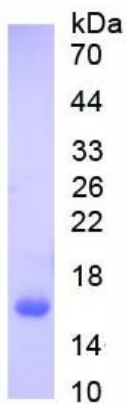
**Figure 1. The hemagglutination of recombinant Rat GAL7**

- (A) Rabbit erythrocyte agglutinated by recombinant rat GAL7;
- (B) Rabbit erythrocyte without recombinant rat GAL7.



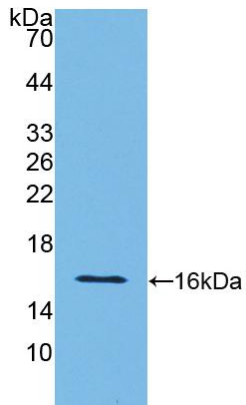
**Figure 2. The hemagglutination assay of GAL7 in V- bottom shaped 96-well microtiter plate.**

## [ IDENTIFICATION ]



**Figure 3. SDS-PAGE**

**Sample: Active recombinant GAL7, Rat**



**Figure 4. Western Blot**

**Sample: Recombinant GAL7, Rat;**

**Antibody: Rabbit Anti-Rat GAL7 Ab (PAA307Ra01)**

**[ 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.