

APA312Ra01 100µg

Active Galectin 12 (GAL12)

Organism Species: *Rattus norvegicus* (Rat)

Instruction manual

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Asp119~Cys311

Tags: N-terminal His-tag

Purity: 80%

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: 25.4kDa

Accurate Molecular Mass: 25kDa 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.

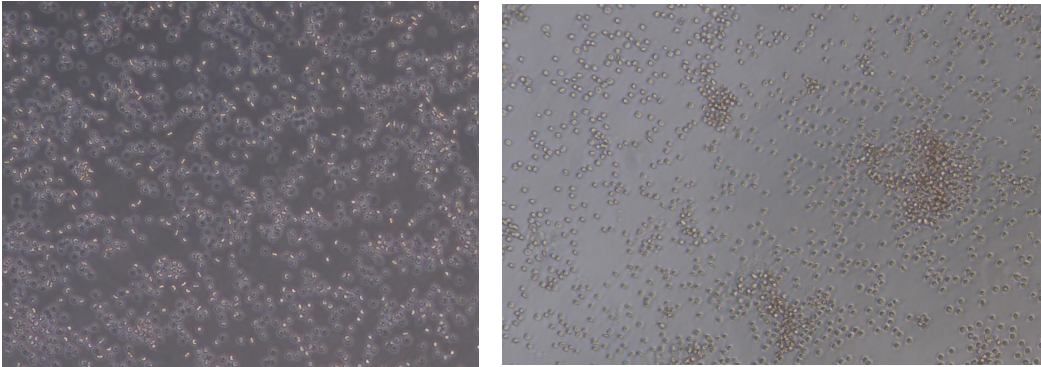
[SEQUENCE]

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GDILVKAVGF LNISPFVEGS REYPVGYPLL LYSRLEVPC SRALPRGLWP
GQVIVVRGLV LKEPKDFTLS LRDGATHVPV TLRASFTDRT LAWVSSWGRK
KLISAPFLFY PQRFFEVL LLL CQEGGLKLAL NGHGLGATSL DQKALEQLRD
LRISGSVHLY C
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[ACTIVITY]

Galectin-12 is a member of a family of mammalian lectins known as galectins. The galectins constitute a large family of carbohydrate-binding proteins that function in many systems both intracellularly and following secretion. Galectins contain either one or two carbohydrate recognition domains (CRR) which mediate recognition of N-acetyl-lactosamine-containing glycoproteins. Individual galectins differ in their tissue distribution and in their carbohydrate-binding specificities. Galectin-12 is predominantly expressed in adipose tissue and detected also in macrophages and other leukocytes. It plays an important role in cell-cell adhesion, cell-matrix interactions, macrophage activation, angiogenesis, metastasis, apoptosis. 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 rat GAL12 with 0.9% sodium chloride injection, add 50µL a serial dilution of GAL12 to each well of a U or V-bottom shaped 96-well microtiter plate. The final well serves as a negative control with no GAL12, 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 GAL12 is 3.125 µg/mL.



A

B

Figure 1. The hemagglutination of recombinant Rat GAL12

- (A) Rabbit erythrocyte reacted with no GAL12 for 3h;
- (B) Rabbit erythrocyte reacted with 50ug/ml GAL12 for 3h.

Positive

Negative



Figure 2. The hemagglutination assay of GAL12 in V- bottom shaped 96-well microtiter plate.

[IDENTIFICATION]

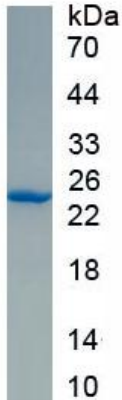


Figure 3. SDS-PAGE

Sample: Active recombinant GAL12, Rat

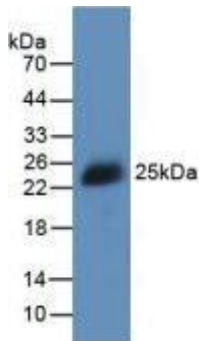


Figure 4. Western Blot

Sample: Recombinant GAL12, Rat;

Antibody: Rabbit Anti-Rat GAL12 Ab (PAA312Ra01)

[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.