APA312Ca01 100μg
Active Galectin 12 (GAL12)
Organism Species: *Canis familiaris; Canine (Dog)*
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: Met1~Tyr314
Tags: N-terminal His-tag
Purity: >90%
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: 8.2
Predicted Molecular Mass: 38.9kDa
Accurate Molecular Mass: 39kDa 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 37ºC 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.

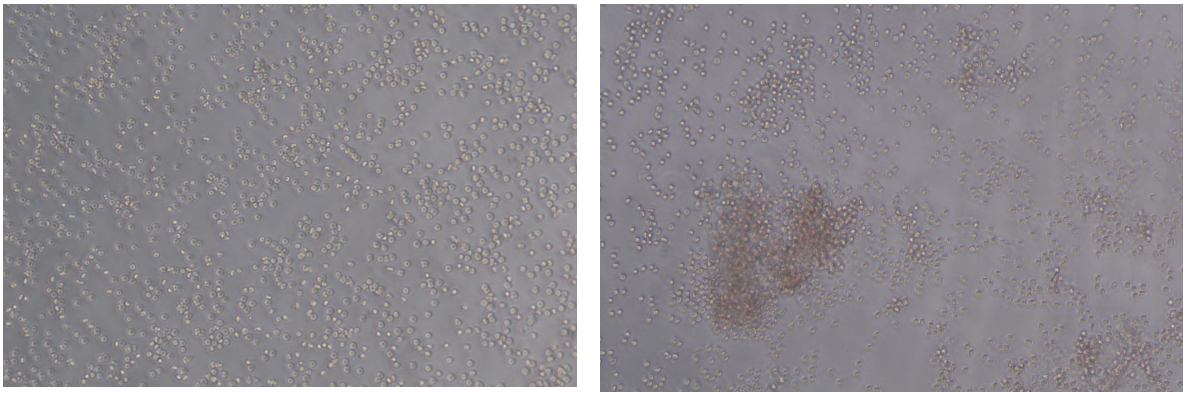
[SEQUENCE]

MSPGEKLDPL PDIFILQPPV FHPVVPYVTT IFGGLRAGKM VMLQGMVPED
AHRFQVDFQC GCSLHPRPDI AIHFNPRFHT TKPHVICNTL QHGRWQAEAR
WPHLTLQRGA SFLILFLFGN EEMKVSVNGQ HFLHYHYRLP LSRVDTLGIF
GNILVEAIGF LNINPFAEGG IEYPIGYPFL LKSPSLKVPC SCALPRGLWP
GQVIVLRALV LSEPKDFTLS LSDEAAHVPV TLRASFADRT LAWISPWGCK
KLISAPFIFY PQRFFEVLLL CQEGGLKLAL NGQGLGAISL HQQALEQLRE
LRISGSVQLY CVHY

[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 dog 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 1.56 μg/mL.



A B

Figure 1. The hemagglutination of recombinant dog 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]

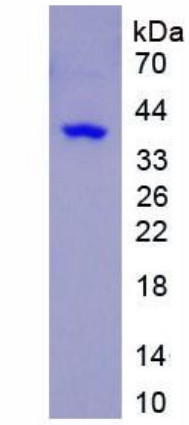


Figure 3. SDS-PAGE

Sample: Active recombinant GAL12, Dog

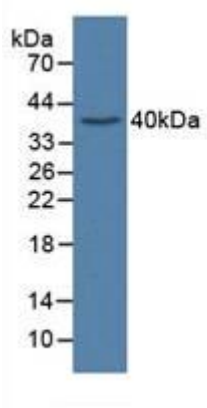


Figure 4. Western Blot

Sample: Recombinant GAL12, Dog;

Antibody: Rabbit Anti-Dog GAL12 Ab (PAA312Ca01)

[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.