APA321Bo01 100μg
Active Galectin 1 (GAL1)
Organism Species: *Bos taurus; Bovine (Cattle)*
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~ Glu135
Tags: N-terminal His-tag
Purity: >92%
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: 6.2
Predicted Molecular Mass: 16kDa
Accurate Molecular Mass: 15kDa 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]

MACGLVASNL NLKPGECLRV RGEVAADAKS FLLNLGKDDN NLCLHFNPRF NAHGDVNTIV CNSKDAGAWG AEQRESAFPF QPGSVVEVCI SFNQTDLTIK LPDGYEFKFP NRLNLEAINY LSAGGDFKIK CVAFE

[ACTIVITY]

Galectins are a family of carbohydrate-binding proteins with an affinity for beta-galactosides. Galectin-1 (GAL1) is differentially expressed by various normal and pathological tissues and appears to be functionally polyvalent, with a wide range of biological activity. The intracellular and extracellular activity of GAL1 has been described. Evidence points to GAL1 and its ligands as one of the master regulators of such immune responses as T-cell homeostasis and survival, T-cell immune disorders, inflammation and allergies as well as host-pathogen interactions.It also can agglutinate red blood. In this case, 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 cattle GAL1 with 0.9% sodium chloride injection, add 50μL a serial dilution of GAL1 to each well of a U or V-bottom shaped 96-well microtiter plate. The final well serves as a negative control without GAL1, 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 GAL1 is 2.5μg/mL.

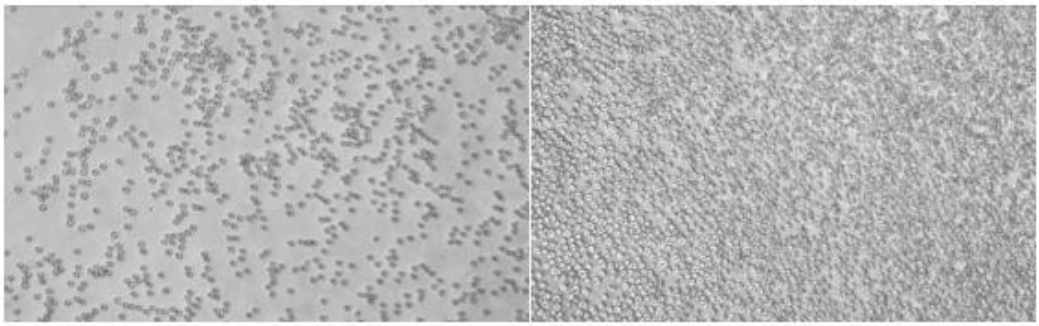

Figure 1. The hemagglutination of recombinant cattle GAL1.

(A) 1% RaE tread with 2.5μg/ml GAL1 for 2h;

(B) Negative control without GAL1.

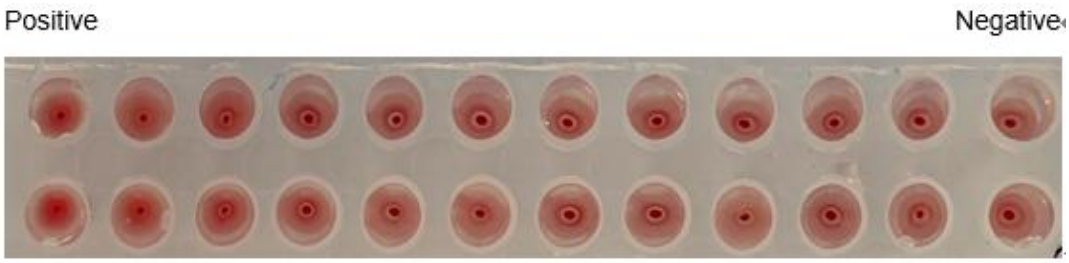

Figure 2. The hemagglutination assay of GAL1 in V- bottom shaped 96-well microtiter plate.

[IDENTIFICATION]

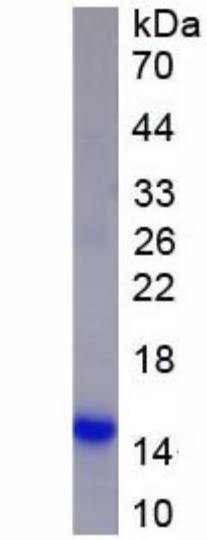

Figure 3. SDS-PAGE

Sample: Active recombinant GAL1, Cattle

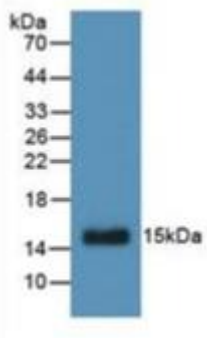

Figure 4. Western Blot

Sample: Recombinant GAL1, Cattle;

Antibody: Rabbit Anti- Cattle GAL1 Ab (PAA321Bo01)

[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.