APA303Ra01 100μg
Active Galectin 3 (GAL3)
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: Met1~Ile262
Tags: N-terminal His-tag
Purity: >92%
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: 8.6
Predicted Molecular Mass: 28.5kDa
Accurate Molecular Mass: 28kDa 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 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]

MADGFSLNDA LAGSGNPNPQ GWPGAWGNQP GAGGYPGASY PGAYPGQAPP
GGYPGQAPPS AYPGPTGPSA YPGPTAPGAY PGPTAPGAFP GQPGGPGAYP
SAPGAYPSAP GAYPATGPFG APTGPLTVPY DMPLPGGVMP RMLITIIGTV
KPNANSITLN FKKGNDIAFH FNPRFNENNR RVIVCNTKQD NNWGREERQS
AFPFESGKPF KIQVLVEADH FKVAVNDVHL LQYNHRMKNL REISQLGIIG
DITLTSASHA MI

[ACTIVITY]

Galectin 3 (GAL3) is a member of the lectin family, of which 14 mammalian galectins have been identified. It is also a member of the beta-galactoside-binding protein family that plays an important role in cell-cell adhesion, cell-matrix interactions, macrophage activation, angiogenesis, metastasis, apoptosis. The protein also has been demonstrated to be involved in cancer, inflammation and fibrosis, heart disease, and stroke. GAL3 is expressed in the nucleus, cytoplasm, mitochondrion, cell surface, and extracellular space. It also can agglutinate red blood. In this case, we choose rabbit erythrocyte (RaE) to assay its ability of agglutination. A general procedure for hemagglutination assay (HA) is as follows, two-fold dilute the recombinant rat GAL3 with 0.01M PBS (pH7.4), add 50μL a serial dilution of GAL3 to each well of a U or V-bottom shaped 96-well microtiter plate. The final well serves as a negative control with no GAL3, replace with 50μL 0.01M PBS. Then add 50μL 1% RaE to each well and mixed gently. The plate is incubated for 1-2 hours at room temperature. The results are shown in Figure 1. The minimal effective concentration of GAL3 is 2.5μg/mL.

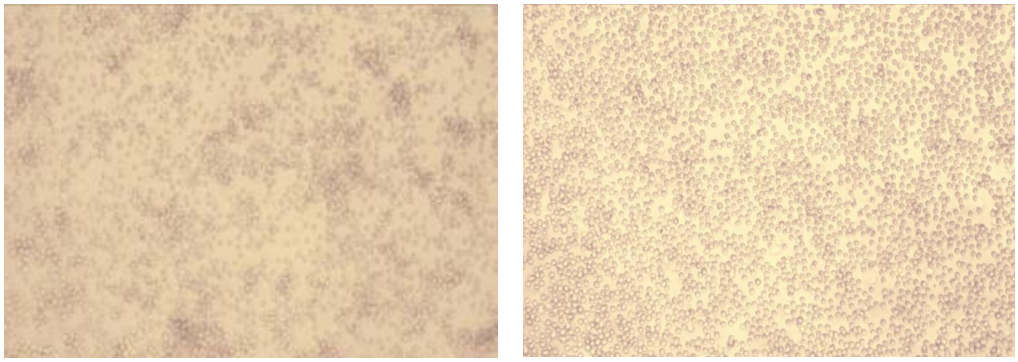

Figure 1. The hemagglutination activity of recombinant rat GAL3.

(A) 1% RaE treated with 2.5μg/mL GAL3 for 2h; (B) Negative control without GAL3.

[IDENTIFICATION]

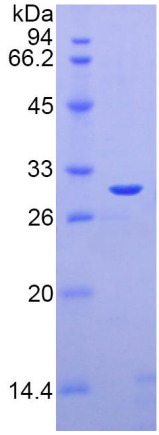

Figure 2. SDS-PAGE

Sample: Active recombinant GAL3, Rat

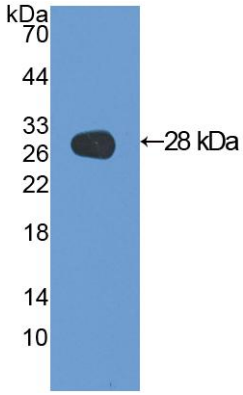

Figure 3. Western Blot

Sample: Recombinant GAL3, Rat;

Antibody: Rabbit Anti-Rat GAL3 Ab (PAA303Ra01)

[IMPORTANT NOTE]

The kit is designed for in vitro and research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.