APA309Hu01 100μg
Active Galectin 9 (GAL9)
Organism Species: Homo sapiens (Human)
Instruction manual

FOR IN VITRO USE AND RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1th Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Met1~Thr355
Tags: Two N-terminal Tags, His-tag and GST-tag
Purity: >92%
Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose.
Applications: Cell culture; Activity Assays; In vivo assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 9.3
Predicted Molecular Mass: 69.5kDa
Accurate Molecular Mass: 69kDa 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 2-8ºC for one month.
Aliquot and store at -80ºC 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]

MAFSGSQAPY LSPAVPFSGT IQGGLQDGLQ ITVNGTVLSS SGTRFAVNFQ
TGFSGNDIAF HFNPRFEDGG YVVCNTRQNG SWGPEERKTH MPFQKGMPFD
LCFLVQSSDF KVMVNGILFV QYFHRVPFHR VDTISVNGSV QLSYISFQNP
RTVPVQPAFS TVPFSQPVCF PPRPRGRRQK PPGVWPANPA PITQTVIHTV
QSAPGQMFST PAIPPMMYPH PAYPMPFITT ILGGLYPSKS ILLSGTVLPS
AQRFHINLCS GNHIAFHLNP RFDENAVVRN TQIDNSWGSE ERSLPRKMPF
VRGQSFSVWI LCEAHCLKVA VDGQHLFEYY HRLRNLPTIN RLEVGGDIQL
THVQT

[ACTIVITY]

GAL9 (Galectin-9) belongs to the galectin family, which is defined by their binding specificity for β-galactoside sugars, such as N-acetyllactosamine (Galβ1-3GlcNAc or Galβ1-4GlcNAc). It is reported that GAL9 induces T-helper type 1 lymphocyte (Th1) death by binding to HAVCR2 (Hepatitis A virus cellular receptor 2); besides, the interaction between GAL9 and PDI (Protein disulfide-isomerase) leads to disulfide reductase activity increasing at the plasma membrane, therefore alters the plasma membrane redox state and enhances cell migration. Thus a binding ELISA assay was conducted to detect the interaction of recombinant human GAL9 with recombinant human HAVCR2 and recombinant human PDI separately. Briefly, GAL9 were diluted serially in PBS, with 0.01%BSA (pH 7.4). Duplicate samples of 100uL were then transferred to HAVCR2-coated and PDI-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-GAL9 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the

addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50μL stop solution to the wells and read at 450nm immediately. The binding activity of GAL9 with HAVCR2 and PDI were shown in Figure 1 and Figure 2, and this effect was in a dose dependent manner.

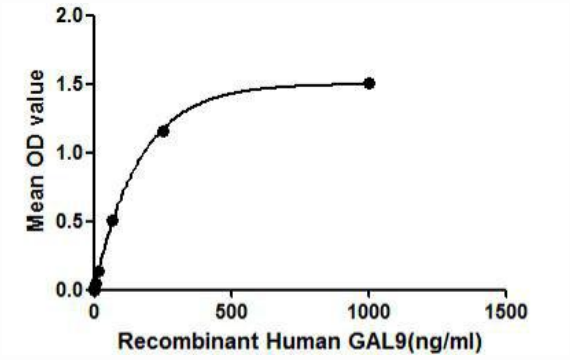

Figure 1. The binding activity of GAL9 with HAVCR2.

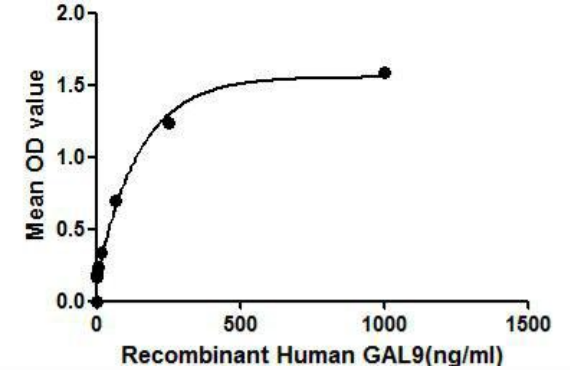

Figure 2. The binding activity of GAL9 with PDI.

[IDENTIFICATION]

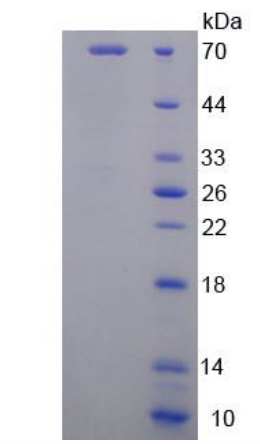

Figure 3. SDS-PAGE

Sample: Active recombinant GAL9, Human

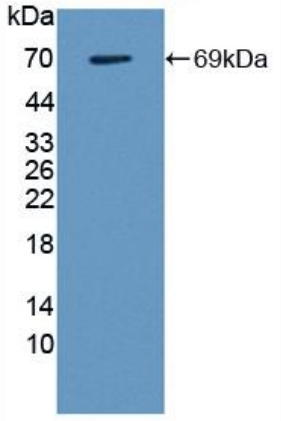

Figure 4. Western Blot

Sample: Recombinant GAL9, Human;

Antibody: Rabbit Anti-Human GAL9 Ab (PAA309Hu01)