

**APB603Ra01 100µg**  
**Active Growth Regulated Oncogene Beta (GROb)**  
**Organism Species: Rattus norvegicus (Rat)**  
***Instruction manual***

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

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1st Edition (Apr, 2016)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Ser32~Asn100

**Tags:** Two N-terminal Tags, His-tag and GST-tag

**Purity:** >98%

**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:** 6.7

**Predicted Molecular Mass:** 37.6kDa

**Accurate Molecular Mass:** 41kDa as determined by SDS-PAGE reducing conditions.

### **Phenomenon explanation:**

The possible reasons that the actual band size differs from the predicted are as follows:

1. Splice variants: Alternative splicing may create different sized proteins from the same gene.
2. Relative charge: The composition of amino acids may affects the charge of the protein.
3. Post-translational modification: Phosphorylation, glycosylation, methylation etc.
4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then cleaved to give the active form.
5. Polymerization of the target protein: Dimerization, multimerization etc.

## **[ 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 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 ]**

SELRCQCLT TLPRVDFKNI  
QSLTVTPPGP HCAQTEVIAT LKDGHEVCLN PEAPLVQRIV QKILNKGKAN

## **[ ACTIVITY ]**

Growth Regulated Oncogene Beta (GROb) is a small cytokine belonging to the CXC chemokine family which produced by activated monocytes and neutrophils and expressed at sites of inflammation. Hematopoietic chemokine, which, in vitro, suppresses hematopoietic progenitor cell proliferation. Besides, Dipeptidyl Peptidase IV (DPP4) has been identified as an interactor of GROb, thus a binding ELISA assay was conducted to detect the interaction of recombinant rat GROb and recombinant rat DPP4. Briefly, GROb were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100ul were then transferred to DPP4-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-GROb 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 of GROb and DPP4 was shown in Figure 1, and this effect was in a dose dependent manner.

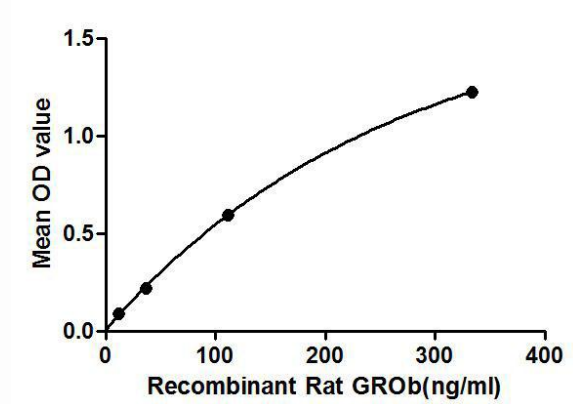


Figure 1. The binding activity of GROb with DPP4.

## [ IDENTIFICATION ]

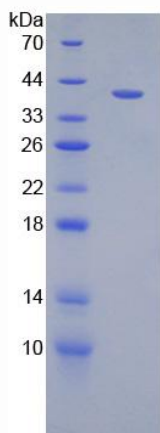
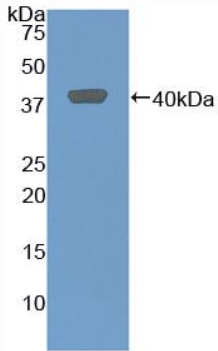


Figure 2. SDS-PAGE

Sample: Active recombinant GROb, Rat



**Figure 3. Western Blot**

**Sample: Recombinant GROb, Rat;**

**Antibody: Rabbit Anti-Rat GROb Ab (PAB603Ra01)**