

**APB409Ha01 100µg  
Active Hemoglobin (HB)**

**Organism Species: *Hamster (Chinese hamster)*  
Instruction manual**

FOR RESEARCH USE ONLY  
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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13th Edition (Revised in Aug, 2023)

## **[ PROPERTIES ]**

**Source:** Natural Extract.

**Host:** Hamster

**Subcellular Location:** Secreted.

**Purity:** >90% as determined by SDS-PAGE.

**Purification Methods:** Salt co-precipitation and ionic-Exchange chromatography.

**Traits:** Freeze-dried powder

**Endotoxin Level:** <1.0EU per 1µg (determined by the LAL method).

**Buffer Formulation:** PBS, pH7.4, containing 5%Trehalose.

**Original Concentration:** 200µg/mL

**Applications:** Cell culture; Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

**Predicted Molecular Mass:** 14&15kDa

**Accurate Molecular Mass:** 14kDa 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.

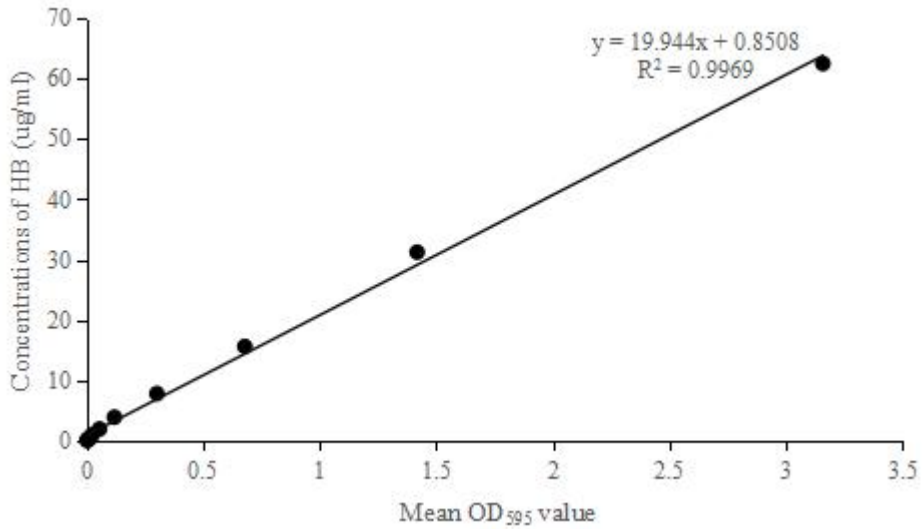
Store at 2-8°C for one month.

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 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.

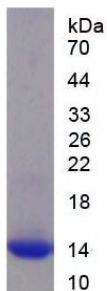
## **[ ACTIVITY ]**

Hemoglobin (HB) is a protein in red blood cells which contains iron. It is used to transport oxygen around the human body. Hemoglobin is found in the red blood cells of almost all vertebrates. Hemoglobin has peroxidase activity. In the presence of hydrogen peroxide, hemoglobin can catalyze the substrates 3,3', 5,5' - tetramethylbenzidine (TMB) to produce a blue compound which has a maximum absorption at 595 nm. Thus, the activity of native chinese hamster hemoglobin was measured by its ability to catalyze the substrates of TMB. The reaction was performed in PBS, pH 7.4 ( Assay Buffer), initiated by addition 40  $\mu$ L of various concentrations of HB (diluted by Assay Buffer) to 160  $\mu$ L of TMB. Incubated at 37  $^{\circ}$ C for 20min, then read at a wavelength of 595 nm immediately. The result was shown in figure 1, and the OD value was in a linear relationship with the concentration of HB.



**Figure 1.**The activity of native chinese hamster hemoglobin

## [ IDENTIFICATION ]



**Figure 2. SDS-PAGE**

**Sample:** Active recombinant HB, Hamster

## [ 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.