

**RPD072Hu01 10µg**  
**Recombinant Carbonic Anhydrase VB, Mitochondrial (CA5B)**  
**Organism Species: Homo sapiens (Human)**  
***Instruction manual***

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

9th Edition (Revised in Jul, 2013)

**[ PROPERTIES ]**

**Residues:** Cys34~Pro317 (Accession # Q9Y2D0),  
with two N-terminal Tags, His-tag and T7-tag.

**Host:** *E. coli*

**Subcellular Location:** Mitochondrion.

**Purity:** >95%

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

**Formulation:** Supplied as lyophilized form in PBS,  
pH7.4, containing 1mM DTT, 5% trehalose, 0.05%  
sarcosyl and preservative.

**Predicted isoelectric point:** 6.6

**Predicted Molecular Mass:** 36.4kDa

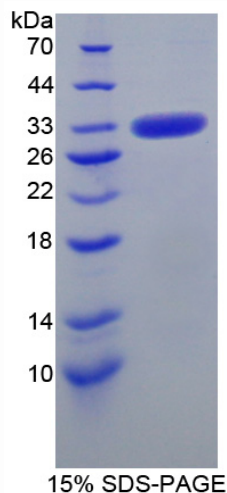
**Accurate Molecular Mass:** 33kDa as determined by SDS-PAGE reducing conditions.

**Applications:** SDS-PAGE; WB; ELISA; IP.

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

**Note:** 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 sterile PBS, pH7.2-pH7.4.

## [ 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 of the target protein. 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. (Referring from China Biological Products Standard, which was calculated by the Arrhenius equation.) The loss of this protein is less than 5% within the expiration date under appropriate storage condition.

## [ SEQUENCES ]

The target protein is fused with two N-terminal Tags, His-tag and T7-tag, its sequence is listed below.

MGSSHHHHHHH SSGLVPRGSH MASMTGGQQM GRGSEF- CSLYTCT YKTRNRALHP  
LWESVDLVPG GDRQSPINIR WRDSVYDPGL KPLTISYDPA TCLHVWNNGY SFLVEFEDST  
DKSVIKGGPL EHNRYRLKQFH FHWGAIDAWG SEHTVDSKCF PAELHLVHWN AVRFEFEDFA  
ALEENGLAVI GVFLKLGKHH KELQKLVDTL PSIKHKDALV EFGSFDPSCL MPTCPDYWTY  
SGSLTTPPLS ESVTWIIKKQ PVEVDHDQLE QFRTLLFTSE GEKEKRMVDN FRPLQPLMNR  
TVRSSFRRHDY VLNVQAKPKP ATSQATP

## [ REFERENCES ]

1. Fujikawa-Adachi K., *et al.* (1999) J. Biol. Chem. 274:21228-21233.
2. Koehler K., *et al.* (2007) Angew. Chem. Int. Ed. Engl. 46:7697-7699.
3. Temperini C., *et al.* (2007) Bioorg. Med. Chem. Lett. 17:2210-2215.
4. Crocetti L., *et al.* (2009) Bioorg. Med. Chem. Lett. 19:1371-1375.