

**NPA782Ov01 100µg**  
**Native Carbonic Anhydrase II (CA2)**  
**Organism Species: Ovis aries; Ovine (Sheep)**  
***Instruction manual***

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

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9th Edition (Revised in Jul, 2013)

## **[ PROPERTIES ]**

**Host:** Native

**Source:** Ovine Erythrocyte

**Subcellular Location:** Cytoplasm.

**Purity:** >90%

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

**Formulation:** Supplied as lyophilized form in 50mM TRIS, 200mM NaCl

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

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

## **[ RELEVANCE ]**

Carbonic anhydrase II is part of the enzyme family that catalyses rapid inter-conversion of carbon dioxide & water to bicarbonate, carbonic acid and protons, a reaction that occurs rather slowly in the absence of a catalyst. The majority of carbonic anhydrases enclose a zinc ion in their active site and therefore is classified as metalloenzymes. The most important function of Carbonic anhydrase is known to preserve acid-base balance in blood and other tissues, and to help transport carbon dioxide of tissues. Carbonic anhydrases have been found in all kingdoms of life.

## **[ 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.

## **[ REFERENCES ]**

1. Tanis R.J., *et al.* (1974) *Biochim. Biophys. Acta* 371:534-548.
2. Mallet B., *et al.* (1979) *Biochim. Biophys. Acta* 576:290-304.
3. Sterling, D., *et al.* (2001) *J. Biol. Chem.* 276 (51): 47886-94.
4. Vince, J W., *et al.* (2000) *Biochemistry* 39 (44): 13344-9.