Active Carbonic Anhydrase II (CA2) Instruction Manual

SBPA174Ra01

Rattus norvegicus (Rat)

Buffer Formulation	20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
Traits	Freeze-dried powder
Purity	> 97%
Isoelectric Point	6.9
Applications	Cell culture; Activity Assays.

ACTIVITY TEST

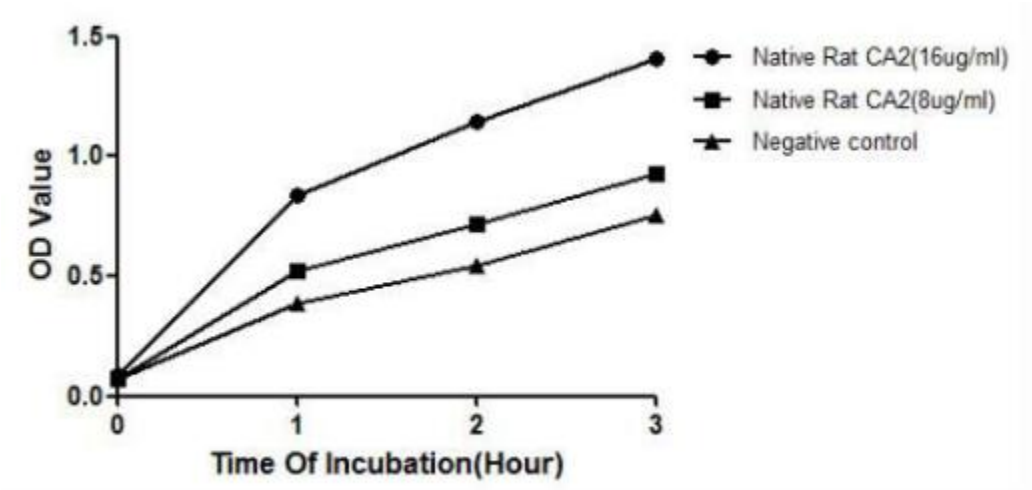


Figure 1. Hydrolysis of p-Nitrophenyl Acetate catalyzed by CA2.

CA2 (Carbonic anhydrase 2) is an enzyme that catalyzes reversible hydration of carbon dioxide. It is essential for bone resorption and osteoclast differentiation and contributes to intracellular pH regulation in the duodenal upper villous epithelium during proton-coupled peptide absorption. It is widely accepted that CA2 also catalyzes hydrolysis of p-Nitrophenyl Acetate. Thus, a hydration assay was conducted to test the catalytic activity of CA2 using 4-Nitrophenyl Acetate (4-NPA) as substrate. Briefly, different concentrations of CA2 were incubated with 1mM 4-NPA in reaction buffer. The absorbance at the wavelength of 400nm was read per hour, and the result was shown in figure 1. It is obvious that CA2 catalyzes hydrolysis of p-Nitrophenyl Acetate.

USAGE

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

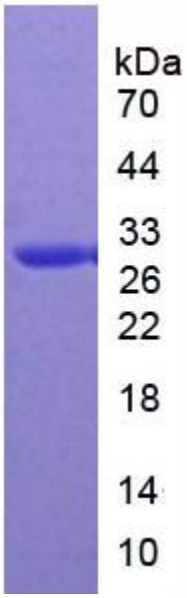
STORAGE

Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Aliquot and store at -80°C for 12 months.

STABILITY

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.

Image



SDS-PAGE Image

[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.