ISO 13485:2016ISO 9001:2015

Ver.250201

Acid Phosphate (ACP) Assay Kit

BC8802-01 (50 Tests)

FOR RESEARCH USE ONLY, DO NOT USE IT IN CLINICAL DIAGNOSIS

Product Description

Acid Phosphatase is one of the acid hydrolases that normally reside in lysosomes. It is a classical marker for the identification of lysosomes in subcellular fractionations.

Para-nitrophenyl phosphate + H_2O $\xrightarrow{ALP}$ p-nitrophenol + Inorgnic phosphate.

The end product has an absorbtion maxima at 405nm

Kit components

Reagent	Volume	Storage
Extraction Reagent	60mL	2-8°C
Reagent I	2 × 24mL	2-8°C
Reagent II	2 × 6mL	2-8°C

Working reagent: Mix 4 volume of Reagent I with 1 volume Reagent II. The working reagent is stable at 2-8°C for 30 days.

Note: Do not use the reagents if turbidity or precipitation is present in any kit component.

Reagents and Equipment Required but Not Provided

Constant temperature water bath, cooling centrifuge, spectrophotometer/microplate reader, micro glass cuvette/96 well flat bottom plate and distilled water.

Enzyme Preparation

Add 1mL Extraction Reagent to 0.1g tissue, grind thoroughly. Centrifuge at 10000rpm, 4°C for 10 minutes. Take the supernatant on ice for the assay. Serum or plasma can be used directly for the assay. Dilute the sample with Extraction Reagent if the reading is high.

Operation Procedures

1. Preheat the spectrophotometer/microplate reader for 30 minutes, adjust wavelength to 405 nm and set zero with distilled water.
2. To a 1.5mL microcentrifuge tube, add 1mL Working reagent followed by 20µL sample.
3. Mix and incubate at 37°C for 1 minute.
4. Measure OD (A_1) immediately after 1 minute of incubation and A_2 after 3 minutes.

   $\Delta A = A_2 - A_1$

Calculations

ACP Activity (U/L) = $\Delta A \times 2750$