APA994Mu02 100μg
Active Acid Phosphatase 1 (ACP1)
Organism Species: *Mus musculus (Mouse)*
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Met1~Tyr158
Tags: N-terminal His-tag
Purity: >90%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 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 isoelectric point: 6.7
Predicted Molecular Mass: 21.6kDa
Accurate Molecular Mass: 22kDa 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 2-8ºC for one month.
Aliquot and store at -80ºC for 12 months.

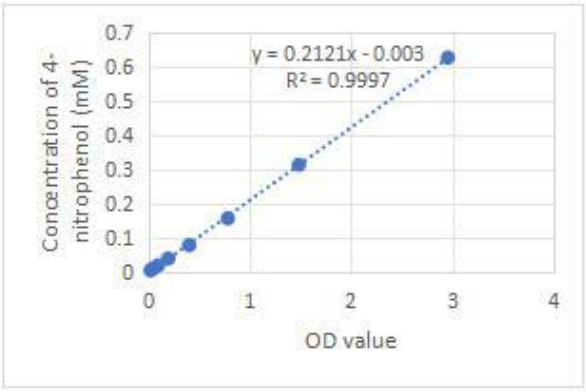
Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37ºC for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

MAEVGSKSVLFVCLGNICRSPIAEAVFRKLVTDEKVSDNWRIDSAATSTYEVGNPPDYRGQNCMRKHGIHMQHIARQ
ITKEDFATFDYILCMDESNLRDLNRKSNQVKNCKAKIELLGSYDPQKQLIIEDPYYGNDSDFEVVYQQCLRCCKAFL
EKTY

[ACTIVITY]

Acid phosphatase locus 1 (ACP1) is a low molecular weight protein tyrosine phosphatase that has been shown to be an important regulator of insulin receptor signaling. The activity assay of recombinant mouse ACP1 was measured by its ability to cleave a peptide substrate, 4-Nitrophenyl phosphate disodium (PNPP). The reaction was performed in 50 mM NaOAc, pH 5.0 (assay buffer), initiated by addition 50 μl of 3 ug/ml ACP1 (diluted by assay buffer) to 50 μL of 2 mM substrate. Incubated at room temperature for 5 minutes in the dark and add 100 μl of 0.2 M NaOH to stop the reaction. Read at a wavelength of 405 nm (top read), the specific activity of recombinant mouse ACP1 is >32000 pmol/min/μg.



OD405	4-Nitrophenol (mM)
2.9522	0.625
1.4834	0.3125
0.7836	0.15625
0.4016	0.078125
0.1954	0.0390625
0.0964	0.01953125
0.0475	0.009765625
0.0221	0.004882813

Figure 1. The standard curve of 4-Nitrophenol

One unit of enzyme activity is defined as the 1 μg of enzyme required to convert 1 pmol of PNPP to 4-nitrophenol in 1 min.

Specific Activity (pmol/min/μg)= $\frac{\Delta RFU * F}{T * N}$

△RFU=Adjusted for Substrate Blank

F=Conversion Factor (convert from standard curve of 4-nitrophenol)

T= Time

N=Amount of enzyme

[IDENTIFICATION]

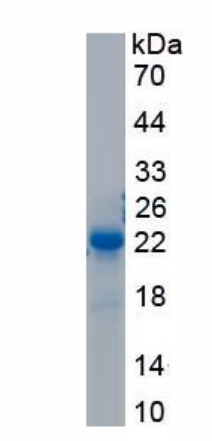


Figure 2. SDS-PAGE

Sample: Active recombinant ACP1, Mouse

[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.