

APE914Hu01 100µg
Active Sirtuin 4 (SIRT4)

Organism Species: *Homo sapiens (Human)*
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Ser28~Cys314

Tags: N-terminal His-tag

Purity: >98%

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

Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose.

Applications: Cell culture; Activity Assays.

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

Predicted isoelectric point: 8.8

Predicted Molecular Mass: 35.9kDa

Accurate Molecular Mass: 36kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

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

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C for 12 months.

Stability Test: The thermal stability is described by the loss rate. 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.

[SEQUENCE]

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SIG LFVPASPPLD PEKVKELQRF
ITLSKRLLVM TGAGISTESG IPDYRSEKVG LYARTDRRPI QHGDFVRSAP
IRQRYWARNF VGWPQFSSHQ PNPAAHWALST WEKLGKLYWL VTQNVDALHT
KAGSRRLTEL HGCMDRVLCL DCGEQTPRGV LQERFQVLNP TWSAEAHGLA
PDGDVFLSEE QVRSFQVPTC VQCGGHLKPD VVFFGDTVNP DKVDFVHKRV
KEADSLLVVG SSLQVYSGYR FILTAWEKKL PIAILNIGPT RSDDLACLKL
NSRCGELLPL IDPC
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[ACTIVITY]

Sirtuin 4, also known as SIRT4, is a member of the sirtuin family. SIRT4 is a mitochondrial ADP-ribosyltransferase that inhibits mitochondrial glutamate dehydrogenase 1 activity, thereby downregulating insulin secretion in response to amino acids. It has been shown that SIRT4 regulates fatty acid oxidation and mitochondrial gene expression in liver and muscle cells. Besides, Heat Shock 60kD Protein 1, Chaperonin (HSPD1) has been identified as an interactor of SIRT4, thus a binding ELISA assay was conducted to detect the interaction of recombinant human SIRT4 and recombinant human HSPD1. Briefly, SIRT4 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100µL were then transferred to HSPD1-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-SIRT4 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50µL stop solution to the wells and read at 450nm immediately. The binding activity of SIRT4 and HSPD1 was shown in Figure 1, and this effect was in a dose dependent manner.

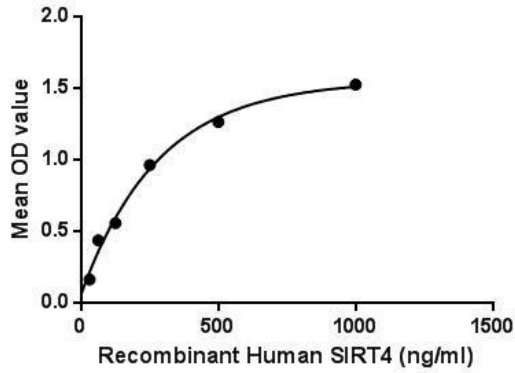


Figure 1. The binding activity of SIRT4 with HSPD1.

[IDENTIFICATION]

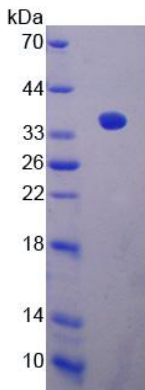


Figure 2. SDS-PAGE

Sample: Active recombinant SIRT4, Human

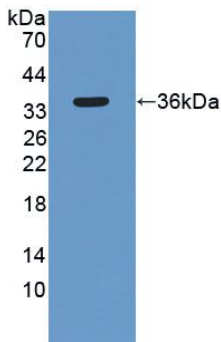


Figure 3. Western Blot**Sample: Recombinant SIRT4, Human;****Antibody: Rabbit Anti-Human SIRT4 Ab (PAE914Hu01)****[IMPORTANT NOTE]**

The kit is designed for in vitro and research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.