

Recombinant Human SIRT4 protein ab101713

1 Image

Description

Product name	Recombinant Human SIRT4 protein
Purity	> 70 % SDS-PAGE.
Expression system	Escherichia coli
Accession	<u>Q9Y6E7</u>
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	MKMSFALTFRSAKGRWIANPSQPCSKASIGLFVPASPPL DPEKVKELQRF ITLSKRLLVMTGAGISTESGIPDYRSEKVGLYARTDRRIQH GDFVRSAP IRQRYWARNFVGWPQFSSHQPNPAHWALSTWEKLGKLY WLVTQNVDALHT KAGSRRLTELHGCMDRVLCCLDCGEQTPRGVLQERFQVL NPTWSAEAHGLA PDGDVFLSEEQVRSFQVPTCVQC GGHLKPDVVFVGDTV NPDKVDFVHKRV KEADSLLVVGSSSLQVYSGYRFILTAWEKKLPAILNIGPTRS DDLACLKL NSRCGELLPLIDPC
Predicted molecular weight	62 kDa including tags
Amino acids	1 to 314
Tags	GST tag N-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab101713** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE
Form	Liquid

## Preparation and Storage

### Stability and Storage

Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles.

pH: 7.50

Constituents: 0.307% Glutathione, 0.00174% PMSF, 0.00385% DTT, 0.79% Tris HCl, 0.00292% EDTA, 25% Glycerol (glycerin, glycerine), 0.87% Sodium chloride

## General Info

### Function

Acts as NAD-dependent protein lipoamidase, ADP-ribosyl transferase and deacetylase. Catalyzes more efficiently removal of lipoyl- and biotinyl- than acetyl-lysine modifications. Inhibits the pyruvate dehydrogenase complex (PDH) activity via the enzymatic hydrolysis of the lipoamide cofactor from the E2 component, DLAT, in a phosphorylation-independent manner (PubMed:25525879). Catalyzes the transfer of ADP-ribosyl groups onto target proteins, including mitochondrial GLUD1, inhibiting GLUD1 enzyme activity. Acts as a negative regulator of mitochondrial glutamine metabolism by mediating mono ADP-ribosylation of GLUD1: expressed in response to DNA damage and negatively regulates anaplerosis by inhibiting GLUD1, leading to block metabolism of glutamine into tricarboxylic acid cycle and promoting cell cycle arrest (PubMed:16959573, PubMed:17715127). In response to mTORC1 signal, SIRT4 expression is repressed, promoting anaplerosis and cell proliferation. Acts as a tumor suppressor (PubMed:23562301, PubMed:23663782). Also acts as a NAD-dependent protein deacetylase: mediates deacetylation of 'Lys-471' of MLYCD, inhibiting its activity, thereby acting as a regulator of lipid homeostasis (By similarity). Controls fatty acid oxidation by inhibiting PPARA transcriptional activation. Impairs SIRT1:PPARA interaction probably through the regulation of NAD(+) levels (PubMed:24043310). Down-regulates insulin secretion.

### Tissue specificity

Detected in vascular smooth muscle and striated muscle. Detected in insulin-producing beta-cells in pancreas islets of Langerhans (at protein level). Widely expressed. Weakly expressed in leukocytes and fetal thymus.

### Sequence similarities

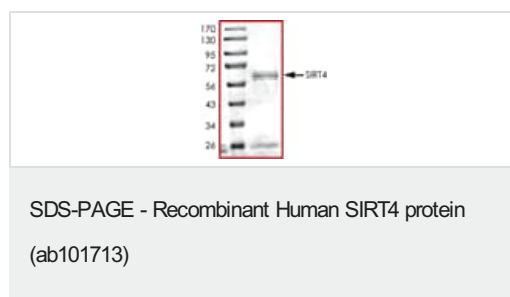
Belongs to the sirtuin family. Class II subfamily.

Contains 1 deacetylase sirtuin-type domain.

### Cellular localization

Mitochondrion matrix.

## Images



The purity of ab101713 was determined to be 90% by densitometry.

Approximate MWt: 62kDa

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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