

Anti-SIR4 antibody



Description	Unconjugated Rabbit polyclonal to SIR4
Model	STJ191020
Host	Rabbit
Reactivity	Human, Mouse
Applications	ELISA, WB
Immunogen	Synthesized peptide derived from human SIR4 protein.
Immunogen Region	30-110aa
Gene ID	23409
Gene Symbol	SIRT4
Dilution range	WB 1:500-2000 ELISA 1:5000-20000
Specificity	SIR4 Polyclonal Antibody detects endogenous levels of protein.
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.
Purification	SIR4 antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	NAD-dependent protein lipoamidase sirtuin-4, mitochondrial NAD-dependent ADP-ribosyltransferase sirtuin-4 NAD-dependent protein deacetylase sirtuin-4 Regulatory protein SIR2 homolog 4 SIR2-like protein 4

Molecular Weight	34 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid form in PBS containing 50% glycerol, and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:14932OMIM:604482
Alternative Names	NAD-dependent protein lipoamidase sirtuin-4, mitochondrial NAD-dependent ADP-ribosyltransferase sirtuin-4 NAD-dependent protein deacetylase sirtuin-4 Regulatory protein SIR2 homolog 4 SIR2-like protein 4
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 . 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 . In response to mTORC1 signal, SIRT4 expression is repressed, promoting anaplerosis and cell proliferation. Acts as a tumor suppressor . 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 . Controls fatty acid oxidation by inhibiting PPARA transcriptional activation. Impairs SIRT1:PPARA interaction probably through the regulation of NAD(+) levels . Down-regulates insulin secretion.
Cellular Localization	Mitochondrion matrix