

## Recombinant SIRT4 (25-314) protein

**Catalog No:** 31530, 31930

**Lot No:** 21516001

**Expressed In:** *E. coli*

**Quantity:** 50 µg

**Concentration:** 0.5 µg/µl

**Source:** Human

**Buffer Contents:** Recombinant SIRT4 (25-314) protein is supplied at a concentration of 0.5 µg/µl in 25 mM Tris pH 8.0, 300 mM NaCl, 5% glycerol.

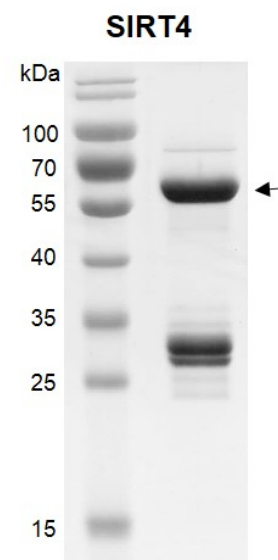
**Background:** SIRT4 (Sirtuin 4) is a member of the SIR2 / Sirtuin family of NAD<sup>+</sup>-dependant deacetylase enzymes. Sirtuin family enzymes can be found in the cytoplasm, mitochondria or nucleus of a cell and are ubiquitously expressed. SIRT4 has multiple enzymatic functions, such as NAD<sup>+</sup>-dependent protein lipoamidase, ADP-ribosyl transferase and deacetylase. SIRT4 catalyzes more efficiently removal of lipoyl- and biotinyl- than acetyl-lysine modifications. It 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. SIRT4 catalyzes the transfer of ADP-ribosyl groups onto target proteins, such as mitochondrial GLUD1. It acts as a negative regulator of mitochondrial glutamine metabolism by mediating mono ADP-ribosylation of GLUD1. It also acts as a NAD<sup>+</sup>-dependent protein deacetylase to mediate deacetylation of Lys-471 of MLYCD, inhibiting its activity, thereby acting as a regulator of lipid homeostasis.

**Protein Details:** Recombinant SIRT4 (25-314) protein that includes amino acids 25-314 of human SIRT4 protein (accession number NM\_012240.2) was expressed in *E. coli* and contains an N-terminal GST tag with a molecular weight of 64 kDa. The purity of the protein is > 60% by SDS-PAGE.

**Application Notes:** This protein is useful for protein deacetylase, lipoamidase and ADP-ribosyl transferase assays and the study of enzyme kinetics, screening inhibitors, and selectivity profiling.

**Storage and Guarantee:** Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.



**Recombinant SIRT4 (25-314) 12.5%**  
SDS-PAGE Coomassie staining MW: 64  
kDa  
**Purity:** > 60%