## Recombinant SIRT1 protein

Catalog No: 31340, 31914 Expressed In: *E. coli* 

**Buffer Contents:** Recombinant SIRT1 protein supplied at a concentration of 0.2  $\mu$ g/µl in 20 mM Tris-HCl (pH7.3), 300 mM KCl, 0.2 mM EDTA and 20% glycerol.

**Background:** SIRT1 (Sirtuin 1, SIR2L1) is a member of the Sirtuin family of proteins related to the yeast Sir2 protein. Like Sir2 and other Sirtuins, SIRT1 is an NAD-dependent histone and protein deacetylase. SIRT1 catalyzes the removal of acetyl groups from a variety of protein substrates (NBS1, p53, Ku70, *etc.*) as well as from Histone H4 Lys16 (H4K16). SIRT1 is involved in the regulation of a number of cellular processes, including transcription, metabolism, DNA repair and aging, and increased SIRT1 is associated with extended lifespan of *C. elegans*.

**Protein Details:** SIRT1 is a histone and protein deacetylase, an NAD-dependant enzyme that removes acetyl groups from lysine acetylated proteins. SIRT1 has been shown to deacetylate histone H4 at lysine 16. Recombinant human SIRT1 was expressed in *E. coli* as the full length protein (accession number AAD40849) with an N-terminal FLAG tag. The molecular weight of the protein is ~120 kDa.

**Application Notes:** Recombinant SIRT1 is suitable for use in histone deacetylase assays. A recommended starting point for the HDAC assay is 25-100 ng of recombinant protein per reaction.

**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.

## Quantity: 10 µg Concentration: 0.2 µg/µl Source: Human

98 -64 -

148 -

SIRT1

## **Recombinant SIRT1 protein gel.** SIRT1 protein was run on an SDS-

PAGE gel and stained with Coomassie blue.



**Recombinant SIRT1 activity assay** 25 ng of acetylated p53 (α-Acp53) was incubated with SIRT1 protein in reaction buffer including 40mM Tris pH 8.0, 5 mM MgCl2, 2mM NAD, and 140

mM KCl for 2 hour at 30c.

+ + -WT WT WT

100 350 350 ng

a-Acp53

NAD +

SIRT1 -

