

Product datasheet

Recombinant human SIRT7 protein ab109045

Overview

Product name	Recombinant human SIRT7 protein
Protein length	Full length protein

Description

Nature	Recombinant
Source	Escherichia coli

Amino Acid Sequence

Accession	Q9NRC8
Species	Human
Molecular weight	45 kDa
Amino acids	1 to 400
Tags	His tag N-Terminus

Specifications

Our [Abpromise guarantee](#) covers the use of **ab109045** in the following tested applications.

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

Biological activity	HDAC activity
Applications	SDS-PAGE Functional Studies
Purity	> 90 % SDS-PAGE. ab109045 is 0.2 µm filtered.
Form	Liquid

Preparation and Storage

Stability and Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles. Preservative: None Constituents: 55mM Tris HCl, 150mM Sodium chloride, 1mM DTT, pH 8.2 This product is an active protein and may elicit a biological response in vivo, handle with caution.
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General Info

Function	NAD-dependent protein deacetylase that specifically mediates deacetylation of histone H3 at 'Lys-18' (H3K18Ac). In contrast to other histone deacetylases, displays selectivity for a single histone mark, H3K18Ac, directly linked to control of gene expression. H3K18Ac is mainly present around the transcription start site of genes and has been linked to activation of nuclear hormone receptors. SIRT7 thereby acts as a transcription repressor. Moreover, H3K18 hypoacetylation has been reported as a marker of malignancy in various cancers and seems to maintain the transformed phenotype of cancer cells. These data suggest that SIRT7 may play a key role in oncogenic transformation by suppresses expression of tumor suppressor genes by locus-specific deacetylation of H3K18Ac at promoter regions. Also required to restore the transcription of ribosomal RNA (rRNA) at the exit from mitosis: promotes the association of RNA polymerase I with the rDNA promoter region and coding region. Stimulates transcription activity of the RNA polymerase I complex. May also deacetylate p53/TP53 and promotes cell survival, however such data need additional confirmation.
Sequence similarities	Belongs to the sirtuin family. Class IV subfamily. Contains 1 deacetylase sirtuin-type domain.
Post-translational modifications	Phosphorylated during mitosis.
Cellular localization	Cytoplasm. Nucleus, nucleolus. Located close to the nuclear membrane when in the cytoplasm. Associated with chromatin. Associated with rDNA promoter and transcribed region. Associated with nucleolar organizer regions during mitosis.

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