



# Rat NAD-dependent protein deacetylase sirtuin-1(SIRT1) ELISA kit

|                                     |                                                                                                          |
|-------------------------------------|----------------------------------------------------------------------------------------------------------|
| <b>Product Code</b>                 | CSB-EL021339RA                                                                                           |
| <b>Abbreviation</b>                 | SIRT1                                                                                                    |
| <b>Protein Biological Process 1</b> | Apoptosis/Autophagy                                                                                      |
| <b>Target Name</b>                  | sirtuin (silent mating type information regulation 2 homolog) 1 (S. cerevisiae)                          |
| <b>Alias</b>                        | RP11-57G10.3, SIR2L1, SIR2alpha sir2-like 1 sirtuin 1 sirtuin type 1                                     |
| <b>Product Type</b>                 | ELISA Kit                                                                                                |
| <b>Immunogen Species</b>            | Rattus norvegicus (Rat)                                                                                  |
| <b>Protein Biological Process 3</b> | Apoptosis                                                                                                |
| <b>Sample Types</b>                 | serum, plasma, tissue homogenates, cell lysates                                                          |
| <b>Detection Range</b>              | 34.3 pg/mL-2200 pg/mL                                                                                    |
| <b>Sensitivity</b>                  | 8.5 pg/mL                                                                                                |
| <b>Assay Time</b>                   | 1-5h                                                                                                     |
| <b>Sample Volume</b>                | 50-100ul                                                                                                 |
| <b>Detection Wavelength</b>         | 450 nm                                                                                                   |
| <b>Lead Time</b>                    | 3-5 working days after you place the order, and it takes another 3-5 days for delivery via DHL or FedEx. |
| <b>Research Area</b>                | Epigenetics and Nuclear Signaling                                                                        |
| <b>Gene Names</b>                   | Sirt1                                                                                                    |
| <b>Tag Info</b>                     | quantitative                                                                                             |
| <b>Protein Description</b>          | Sandwich                                                                                                 |

## Description

The Rat NAD-dependent protein deacetylase sirtuin-1(SIRT1) ELISA kit is the ideal tool for researchers working in the field of epigenetics and nuclear signaling. This quantitative sandwich assay is designed to detect and quantify the protein expression levels of NAD-dependent protein deacetylase sirtuin-1, also known as SIRT1, in serum, plasma, tissue homogenates, and cell lysates from Rattus norvegicus (Rat).

With a detection range of 34.3 pg/mL-2200 pg/mL and a sensitivity of 8.5 pg/mL, this ELISA kit provides accurate and precise results for your research needs. The assay time is between 1-5 hours, and the required sample volume is only 50-100ul, making it a convenient and efficient tool for your laboratory.



The detection wavelength of 450 nm ensures reliable and consistent results, and the kit comes with all the necessary components and reagents to perform the assay. With more than 3 citations, this kit has been validated and tested by other researchers, providing you with confidence in your results.

### Target Details

This gene encodes a member of the sirtuin family of proteins, homologs to the yeast Sir2 protein. Members of the sirtuin family are characterized by a sirtuin core domain and grouped into four classes. The functions of human sirtuins have not yet been determined; however, yeast sirtuin proteins are known to regulate epigenetic gene silencing and suppress recombination of rDNA. Studies suggest that the human sirtuins may function as intracellular regulatory proteins with mono-ADP-ribosyltransferase activity. This protein is included in class I of the sirtuin family. Alternative splicing results in multiple transcript variants.

### Product Precision

Intra-assay Precision (Precision within an assay): CV%<8%

Three samples of known concentration were tested twenty times on one plate to assess.

Inter-assay Precision (Precision between assays): CV%<10%

Three samples of known concentration were tested in twenty assays to assess.

### Linearity

To assess the linearity of the assay, samples were spiked with high concentrations of rat SIRT1 in various matrices and diluted with the Sample Diluent to produce samples with values within the dynamic range of the assay.

|     | Sample    | Serum(n=4) |
|-----|-----------|------------|
| 1:1 | Average % | 92         |
|     | Range %   | 86-94      |
| 1:2 | Average % | 102        |
|     | Range %   | 97-105     |
| 1:4 | Average % | 91         |
|     | Range %   | 87-95      |
| 1:8 | Average % | 98         |
|     | Range %   | 92-102     |

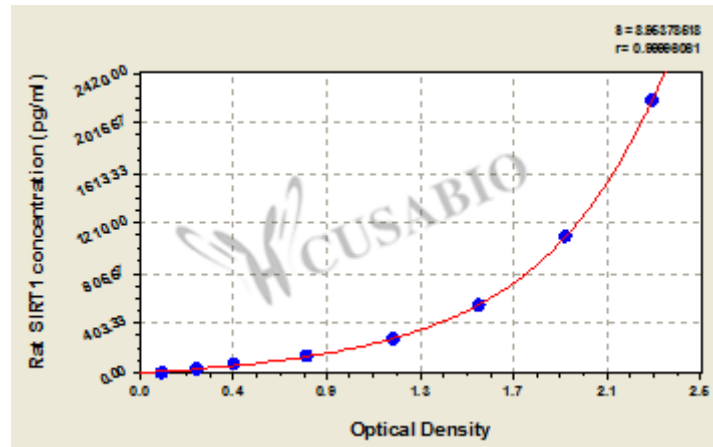
### Recovery

The recovery of rat SIRT1 spiked to levels throughout the range of the assay in various matrices was evaluated. Samples were diluted prior to assay as directed in the Sample Preparation section.

| Sample Type       | Average % Recovery | Range  |
|-------------------|--------------------|--------|
| Serum (n=5)       | 94                 | 89-98  |
| EDTA plasma (n=4) | 99                 | 95-105 |

### Typical

These standard curves are provided for demonstration only. A standard curve should be generated for each set of samples assayed.



| pg/ml | OD1   | OD2   | Average | Corrected |
|-------|-------|-------|---------|-----------|
| 2200  | 2.357 | 2.272 | 2.315   | 2.209     |
| 1100  | 1.976 | 1.873 | 1.925   | 1.819     |
| 550   | 1.582 | 1.486 | 1.534   | 1.428     |
| 275   | 1.141 | 1.158 | 1.150   | 1.044     |
| 137.5 | 0.761 | 0.757 | 0.759   | 0.653     |
| 68.75 | 0.436 | 0.425 | 0.431   | 0.325     |
| 34.3  | 0.262 | 0.266 | 0.264   | 0.158     |
| 0     | 0.107 | 0.105 | 0.106   |           |

## Msds

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    "filename": "MSDS"
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