

# Active Sirtuin 2 (SIRT2), Human Recombinant

<b>CATALOG #:</b>	7698-10	10 µg
	7698-50	50 µg
	7698-1000	1 mg
<b>ALTERNATE NAMES:</b>	NAD-dependent protein deacetylase sirtuin-2, Regulatory protein SIR2 homolog 2, SIR2-like protein 2, SIR2L, SIR2L2.	
<b>SOURCE:</b>	<i>E. coli</i>	
<b>PURITY:</b>	≥ 90 % by SDS-PAGE	
<b>SPECIFIC ACTIVITY:</b>	≥ 0.5 mU/mg	
<b>MOLECULAR WEIGHT:</b>	60 kDa (2 to 389 aa + N-terminal His and Trx Tag)	
<b>FORM:</b>	Sirtuin 2 (SIRT2) with a His-tag is supplied as lyophilized powder.	
<b>FORMULATION:</b>	Human Sirtuin 2 is lyophilized from 50 mM Tris, pH 8.0.	
<b>STORAGE CONDITIONS:</b>	Stable for 1 year at -20 °C.	

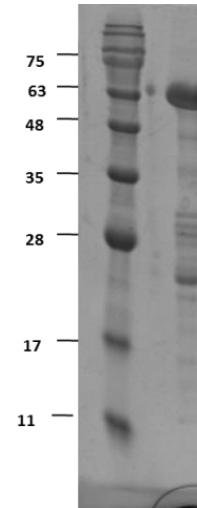
**RECONSTITUTION:** Centrifuge the vial prior to opening. Reconstitute in 25 mM Tris, pH 7.5, 100 mM NaCl, 2.7 mM KCl, 3 mM MgCl<sub>2</sub> and 35% Glycerol to a concentration of 0.1 – 1 mg/ml and let the lyophilized pellet dissolve completely. This solution can then be stored at -20 °C for future use. For long term storage, it is recommended to add a carrier protein (0.1% BSA) in above reconstitution solution. Avoid multiple freeze/thaw cycles.

**BACKGROUND DESCRIPTION:** Sirtuins function as intracellular regulatory proteins. Human Sirtuin 2 is a member of the class III histone deacetylases (HDACs) and has been implicated in many cellular processes that include histone deacetylation, gene silencing, chromosomal stability, and aging. Human SIRT2 is a cytoplasmic protein responsible for the deacetylation of histone H4 and α-tubulin, a modification important for controlling the cell cycle. Specifically, SIRT2 protein co-localizes with HDAC6 and microtubules and functions as a mitotic checkpoint in preventing chromosomal instability that can lead to hyperploid cells. SIRT2 is found in many tissues, but is specifically enriched in skeletal muscle, the heart, and in oligodendroglia cells in the brain. The enzymatic activity of class III HDACs is nicotinamide adenine dinucleotide (0.1 mM NAD<sup>+</sup>) dependent and insensitive to HDAC inhibitor trichostatin A.

**APPLICATION AND USAGE:** Active SIRT2 is useful in studying enzyme regulation, determining target substrates, screening deacetylase inhibitors, or as a positive control in SIRT2 activity assays.

**ACTIVITY:** Activity of SIRT2 was tested with BioVision's Sirtuin Activity assay kit (Cat. No. K324-100) using the substrate Arg-His-Lys-Lys(Ac)-AFC, which is a fluorogenic, acetylated peptide based on residues 379-382 of p53.

**UNIT DEFINITION:** One unit of the recombinant SIRT2 is defined as the amount of enzyme that deacetylates 1 µmol of substrate Arg-His-Lys-Lys(Ac)-AFC per minute at 37 °C under the assay conditions using BioVision's Sirtuin Activity Assay Kit (Fluorometric) (Cat. No. K324).



SDS-PAGE analysis of human Sirtuin 2 protein  
Lane 1: Marker.  
Lane 2: 5 µg of protein is loaded on the gel and stained with Coomassie Blue.

**RELATED PRODUCTS:**

- SIRT4 (GST-tagged), Human recombinant (**Cat. No. 7673-20, -100**)
- SIRT5 (GST-tagged), Human recombinant (**Cat. No. 7674-20, -100**)
- Sirtuin 6, human recombinant (**Cat. No. 7578-10**)
- SIRT 1 Inhibitor, EX-527 (**Cat. No. 1652-10**)
- SIRT 1 Inhibitor Screening Assay Kit (**Cat. No. K322-100**)
- SIRT 2 Inhibitor, AGK2 (**Cat. No. 1651-10**)
- SIRT 2 Inhibitor, AK-7 (**Cat. No. 1857-5, -25**)
- SIRT3 Antibody (**Cat. No. 3223-100**)
- SIRT4 Antibody (**Cat. No. 3224-100**)
- SIRT5 Antibody (**Cat. No. 3225-100**)
- Sirtinol (**Cat. No. 2062-1, -5**)

**FOR RESEARCH USE ONLY! Not to be used in humans.**

