

# SIRT1 (193-747 aa) (GST-tagged), Human recombinant

**CATALOG #:** 7264-25      25 units  
7264-50      50 units

**ALTERNATE NAMES:** NAD-dependent Deacetylase 1, SIR2L1, SIR2-like Protein 1, Sirtuin 1, Silent Information Regulator 2

**SOURCE:** E.Coli

**PURITY:** ≥60% by SDS - PAGE

**MOL. WEIGHT:** 82.9 kDa (193-747 aa, NT GST Tag)

**FORM:** Liquid

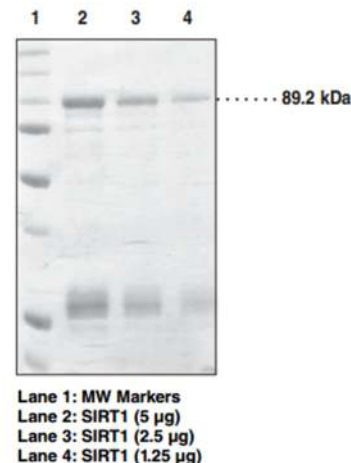
**FORMULATION:** 50 mM sodium phosphate, pH 7.2, containing 100 mM sodium chloride and 20% glycerol

**STORAGE CONDITIONS:** Store at -80°C. Avoid repeated freeze and thaw cycles. Stable for ≥ 9 months.

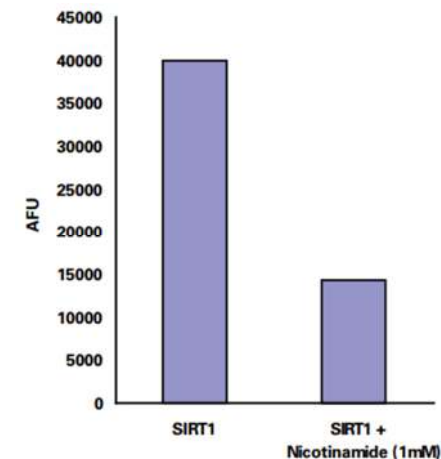
**DESCRIPTION:** The sirtuins represent a distinct class of trichostatin A-insensitive lysyl-deacetylases (class III HDACs) and have been shown to catalyze a reaction that couples lysine deacetylation to the formation of nicotinamide and O-acetyl-ADP-ribose from NAD<sup>+</sup> and the abstracted acetyl group. There are seven human sirtuins, which have been designated SIRT1-7. SIRT1, which is located in the nucleus, is the human sirtuin with the greatest homology to yeast Sir2 (Silent information regulator 2) and has been shown to regulate the activity of the p53 tumor suppressor and inhibit apoptosis. These results have significant implications regarding an important role of SIRT1 in modulating the sensitivity of cells in the p53-dependent apoptotic response and the possible effect in cancer therapy. Since the growth suppressive function of p53 is strongly enhanced by DNA damaging reagents, it is expected that inhibitors of SIRT1 may be effective anti-cancer drugs.

**BIOLOGICAL ACTIVITY:** ≥ 550 pmol/min/mg

**UNIT DEFINITION:** One unit is defined as the amount of enzyme required to produce 1 pmole of 7-amino-4-methylcoumarin/min at 25°C in 50 mM Tris-HCL, pH 8.0, 137 nM NaCl, 2.7 mM KCl, 1 mM MgCl<sub>2</sub> containing 125 μM p53 amino acids 379-382 and 6 mM NAD<sup>+</sup>



Human Recombinant SIRT1



Inhibition of SIRT1 activity by nicotinamide

**RELATED PRODUCTS:**

- Sirtuin 2, human recombinant (Cat. No. 7632-20, -100, -1000)
- SIRT4 (GST-tagged), Human recombinant (Cat. No. 7673-20, -100)
- SIRT5 (GST-tagged), Human recombinant (Cat. No. 7674-20, -100)
- Sirtuin 1 (human intracellular) ELISA Kit (Cat. No. K4923-100)
- Sirtuin 2 (human intracellular) ELISA Kit (Cat. No. K4924-100)
- 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.**