



Product Information Sheet

Product Name:	Human Sirtuin 2, Recombinant
Catalog Number:	72187
Size:	10 µg
Concentration:	Provided on the label
Activity (Unit/µg):	Provided on the label
Unit definition:	One unit of enzyme deacetylates 1 picomole of Green Sirtuin 2 substrate, (AnaSpec, Cat#72188, Component A) per minute at pH 8.0 at 37° C.
Storage:	Store at -80°C. Avoid multiple thaw-freeze cycles.

Instruction:

Histone deacetylases (HDACs) act as transcriptional repressors of genes catalyzing the removal of acetyl groups from a ϵ -N-acetyl lysine of histone.¹ Sirtuin 2 (SIRT2) belongs to a unique class of nicotinamide adenine dinucleotide (NAD⁺)-dependent deacetylases (class III HDACs) that target multiple protein substrates to execute diverse biological functions. Sirtuin 2 is the member of the family of Sir2 (Silent Information Regulator 2) proteins. Besides histones, substrates for SIRT2 also include various transcription factors, the tumor suppressor p53 and alpha-tubulin.²⁻⁴ Human SIRT2 is a cytoplasmic protein that increases in abundance during mitosis and regulates major events of cytokinesis.⁵

The recombinant human Sirtuin 2 (GenBank Accession #: NM_030593) with 13-319 amino acids and His tag at its C-terminal was expressed in *E. coli*. The molecular mass of the enzyme is approximately 35.5 kDa on SDS-PAGE. Its activity can be measured using enzymatic assay with a fluorogenic or FRET substrate (AnaSpec Cat##72188, 72189). 1-0.5 µg of enzyme is sufficient for these assays.

Enzyme is stored in 25 mM Tris-HCl, pH 8.0, 100 mM NaCl, 0.05% Tween-20, 50% glycerol, 3 mM DTT.

References

1. Sterner, DE. et al. *Microbiol. Mol. Biol. Rev.* **64**, 435 (2000).
2. Wang, F. et al. *Aging Cell* **6**, 505 (2007).
3. Jin, Y.-H. et al. *Biochem. Biophys. Res. Commun.* **368**, 690 (2008).
4. Inoue, T. et al. *Cell Cycle* **6**(9) (2007).
5. Dryden, S. et al. *Mol. Cell. Biol.* **23**, 3173 (2003).