



Product Information Sheet

Revision Number: 1.1

Last updated January 23, 2015

Product Name:	Human Sirtuin 1, Recombinant
Catalog Number:	AS-72212
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 1 substrate, (AnaSpec, Cat#72156, 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 1 (SIRT1), the human homolog of yeast Sir2 (Silent Information Regulator 2), is the most studied of the seven members of sirtuin family. SIRT1 have been implicated in several important cellular processes, including genomic stability and DNA repair,^{2,3} p53-mediated apoptosis,⁴ adipogenesis,⁵ and aging.^{6,7}

The recombinant human Sirtuin 1 (GenBank Accession #: NM_012238) with 193- 741 amino acids and GST tag at its N-terminal was expressed in *E. coli*. The molecular mass of the enzyme is approximately 87.2 kDa on SDS-PAGE. Its activity can be measured using enzymatic assay with a fluorogenic or FRET substrates (AnaSpec Cat##72156, 72155). 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

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5. Picard, F. et al. *Nature.* **429**, 771 (2004).
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7. Trapp, J. and Jung, M. *Curr. Drug Target* **7**, 1553 (2006).