LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human SIRT2 Protein
Catalog Number: hRP-1047
Manufacturer: LD Biopharma, Inc.

Introduction

Human NAD-dependnent protein deacetylase sirtuin-2 (SIRT2) 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. The protein encoded by this gene is included in class I of the sirtuin family. Several transcript variants are resulted from alternative splicing of this gene.

Full-length human SIRT2 cDNA (389aa, isoform-2) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. This protein is expressed in E.coli as inclusion bodies. The final product was refolded using our unique "temperature shift inclusion body refolding" technology and chromatographically purified.

Gene Symbol:	SIRT2 (SIR2; SIR2L; SIR2L2)
Accession Number:	NP_085096.1
Species:	Human
Size:	25 µg / Vial
Composition:	0.5 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Glycerol.
Storage:	In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Imaoka,N., et al., *Prognostic significance of sirtuin 2 protein nuclear localization in*

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glioma: an immunohistochemical study. Oncol. Rep. 28 (3), 923-930 (2012)

Zuo,Q., et al., *HDAC6 and SIRT2 promote bladder cancer cell migration and invasion by targeting cortactin*. Oncol. Rep. 27 (3), 819-824 (2012)

Krishnan,J., et al., *Dietary obesity-associated Hif1alpha activation in adipocytes restricts fatty acid oxidation and energy expenditure via suppression of the Sirt2-NAD+ system*. Genes Dev. 26 (3), 259-270 (2012).

Applications

1. May be used for in vitro SIRT2 mediated epigenomic regulation study with "ProFectin" reagent mediated intracellular delivery of this protein.
2. May be used as specific substrate protein for kinase and ubiquitin (Sumo pathway) related enzyme functional screening assays.
3. Potential biomarker protein for glioma treatment / diagnostic developments.
4. As antigen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHHGNLYFQGGEFDFLRNLFSQTLSLGSQKERLLDELTLEGVARYMQS
ERCRRVICLVGAGISTSAGIPDFRSPSTGLYDNLEKYHLPYPEAIFEISYFKKHPEPFFALAKE
LYPGQFKPTICHYFMRLLKDKGLLLRCYTQNIDTLERIAGLEQEDLVEAHGTFYTSHCVSASCR
HEYPLSWMKEKIFSEVTPKCEDCQSLVKPDIVFFGESLPARFFSCMQSDFLKVDLLLVMGTSLQ
VQPFASLISKAPLSTPRLLINKEKAGQSDPFLGMIMGLGGGMDFDSKKAYRDVAWLGECDQGCL
ALAELLGWKKELEDLVRREHASIDAQSGAGVPNPSTSASPKKSPPPAKDEARTTEREKPQ