LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant YFP-Human **HDAC8** -11R Protein
Catalog Number: HRP-3437
Manufacturer: LD Biopharma, Inc. USA

Introduction

Human Histone Deacetylase 8 (HDAC8) is responsible for the deacetylation of lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4). Histone deacetylation gives a tag for epigenetic repression and plays an important role in transcriptional regulation, cell cycle progression and developmental events. Histone deacetylases act via the formation of large multiprotein complexes. It also involved in the deacetylation of cohesin complex protein SMC3 regulating release of cohesin complexes from chromatin. HDAC8 may play a role in smooth muscle cell contractility.

Full-length human HDAC8 cDNA (376aa, derived from BC050433) was constructed with codon optimization gene synthesis and expressed with YFP Protein as N-terminal (YFP; 256aa) and and 11 arginine (11R) tag at its C-terminal. It was 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:	HDAC8	(HDACL1; CDA07)
Accession Number:	NP_060956.1	
Species:	Human	
Size:	75 µg / Vial	
Composition:	1.5 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose, DTT and others.	
Storage:	In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least two weeks.	

Key References

Tsai CY, et al., ***NBM-BMX, an HDAC8 Inhibitor, Overcomes Temozolomide Resistance in Glioblastoma Multiforme by Downregulating the beta-***

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Catenin /c-Myc/SOX2 Pathway and Upregulating p53-Mediated MGMT Inhibition. Int J Mol Sci 22 (11), 5907 (2021)

Zhang R, et al., ***HDAC8-dependent deacetylation of PKM2 directs nuclear localization and glycolysis to promote proliferation in hepatocellular carcinoma***. Cell Death Dis 11 (12), 1036 (2020)

Vannini A, et al.,***Crystal structure of a eukaryotic zinc-dependent histone deacetylase, human HDAC8, complexed with a hydroxamic acid Inhibitor***. Proc Natl Acad Sci U S A 101 (42), 15064-15069 (2004)

Applications

1. May be used for in vitro HDAC8 protein mediated various histone deacetylation regulation for epigenetic study using intracellular delivery of recombinant human YFP-HDAC8-11R protein by adding this protein directly into cell culture medium.
2. May be used for HDAC8 protein-protein interaction assay.
3. May be used as specific substrate protein for HDAC specific kinase, and ubiquitin (Sumo pathway) related enzyme functional screening assays.
4. As native human HDAC8 antigen for its specific antibody production.

Quality Control

Purity: > 91 % by SDS-PAGE.

YFP protein: **Ex λ** = 517nm, and **Em λ** = 530nm.

Recombinant YFP- Human HDAC8-11R Fusion Protein Sequence (73.2 kD)

MK**HHHHHH**QVSKGEELFTGVVPILVELDGDVNGHKFSVSGEGEGDATYGKLTLKLLCTTGKLPV
PWPTLVTTLGYGVQCFARYPDHMKQHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTL
VNRIELKGIDFKEDGNILGHKLEYNYNSHNVYITADKQKNGIKANFKIRHNIEDGGVQLADHYQ
QNTPIGDGPVLLPDNHYLSYQSALFKDPNEKRDHMVLLEFLTAAGITEGMNELYK**GS**ENLYFQG
EFEEPEEPADSGQSLVPVYIYSPEYVSMCDSPAKIPKRASMVHSLIEAYALHKQMRIVKPKVAS
MEEMATFHTDAYLQHLQKVSQEGDDDHPDSIEYGLGYDCPATEGIFDYAAAIGGATITAAQCLI
DGMCKVAINWSGGWHHAKKDEASGFCYLNDAVLGILRLRRKFERILYVDLDLHHGDGVEDAFSF
TSKVMTVSLHKFSPGFFPGTGDVSDVGLGKGRYYSVNVPIQDGIQDEKYYQICESVLKEVYQAF
NPKAVVLQLGADTIAGDPMCSFNMTPVGIGKCLKYILQWQLATLILGGGGYNLANTARCWTYLT
GVILGKTLSSEIPDHEFFTAYGPDYVLEITPSCRPDRNEPHRIQQILNYIKGNLKHVV**ESGGGGS**
PGRRRRRRRRRRR