SANTA CRUZ BIOTECHNOLOGY, INC.

Histone cluster 1 H3D siRNA (m): sc-146006

BACKGROUND

Eukaryotic histones are basic and water soluble nuclear proteins that form hetero-octameric nucleosome particles by wrapping 146 base pairs of DNA in a left-handed super-helical turn sequentially to form chromosomal fiber. Two molecules of each of the four core Histones (H2A, H2B, H3 and H4) form the octamer, which is comprised of two H2A-H2B dimers and two H3-H4 dimers, forming two nearly symmetrical halves by tertiary structure. Histones are subject to posttranslational modification by enzymes primarily on their N-terminal tails, but also in their globular domains. Histone cluster 1 H3D (HIST1H3D), also known as H3FB, is a 136 amino acid member of the H3 Histone family and is encoded by a gene located in the large histone gene cluster on chromosome 6.

REFERENCES

1. Albig, W., et al. 1991. Isolation and characterization of two human H1 Histone genes within clusters of core histone genes. Genomics 10: 940-948.
2. Albig, W., et al. 1997. Human histone gene organization: nonregular arrangement within a large cluster. Genomics 40: 314-322.
3. Albig, W. and Doenecke, D. 1997. The human histone gene cluster at the D6S105 locus. Hum. Genet. 101: 284-294.
4. El Kharroubi, A., et al. 1998. Transcriptional activation of the integrated chromatin-associated human immunodeficiency virus type 1 promoter. Mol. Cell. Biol. 18: 2535-2544.
5. Marzluff, W.F., et al. 2002. The human and mouse replication-dependent histone genes. Genomics 80: 487-498.
6. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 602811. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. Beck, H.C., et al. 2006. Quantitative proteomic analysis of post-translational modifications of human histones. Mol. Cell. Proteomics 5: 1314-1325.
8. Garcia, B.A., et al. 2007. Organismal differences in post-translational modifications in Histones H3 and H4. J. Biol. Chem. 282: 7641-7655.

CHROMOSOMAL LOCATION

Genetic locus: Hist1h3d (mouse) mapping to 13 A3.1.

PRODUCT

Histone cluster 1 H3D siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Histone cluster 1 H3D shRNA Plasmid (m): sc-146006-SH and Histone cluster 1 H3D shRNA (m) Lentiviral Particles: sc-146006-V as alternate gene silencing products.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Histone cluster 1 H3D siRNA (m) is recommended for the inhibition of Histone cluster 1 H3D expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

GENE EXPRESSION MONITORING

Histone cluster 1 H3D (6H8): sc-134355 is recommended as a control antibody for monitoring of Histone cluster 1 H3D gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RESEARCH USE

For research use only, not for use in diagnostic procedures.