SANTA CRUZ BIOTECHNOLOGY, INC.

Histone cluster 1 H2BG siRNA (h): sc-105477

BACKGROUND

Eukaryotic histones are basic water soluble nuclear proteins that form hetero-octameric nucleosome particles by wrapping 146 base pairs of DNA in a left-handed super-helical turn to form chromosomal fibers. 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 post-translational modification by enzymes, primarily on their N-terminal tails, but also in their globular domains. Histone cluster 1 H2BG (HIST1H2BG) is a 126 amino acid nuclear protein that belongs to the histone H2B family and is encoded by a gene located on human chromosome 6p22.2.

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. Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 602798. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Marzluff, W.F., et al. 2002. The human and mouse replication-dependent histone genes. Genomics 80: 487-498.
7. Beck, H.C., et al. 2006. Quantitative proteomic analysis of post-translational modifications of human histones. Mol. Cell. Proteomics 5: 1314-1325.

CHROMOSOMAL LOCATION

Genetic locus: HIST1H2BG (human) mapping to 6p22.2.

PRODUCT

Histone cluster 1 H2BG siRNA (h) is a pool of 2 target-specific 19-25 nt siRNAs 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 H2BG shRNA Plasmid (h): sc-105477-SH and Histone cluster 1 H2BG shRNA (h) Lentiviral Particles: sc-105477-V as alternate gene silencing products.

For independent verification of Histone cluster 1 H2BG (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-105477A and sc-105477B.

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 H2BG siRNA (h) is recommended for the inhibition of Histone cluster 1 H2BG expression in human 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.

RESEARCH USE

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