



# Histone cluster 1 H2AD siRNA (h): sc-105462

## 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 H2AD, also known as HIST1H2AD, H2A.3, H2A/g or H2AFG, is a 130 amino acid nuclear protein that belongs to the Histone H2A family and is encoded by an intronless gene located on human chromosome 6p22.2.

## REFERENCES

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6. Zhang, Y., Griffin, K., Mondal, N. and Parvin, J.D. 2004. Phosphorylation of Histone H2A inhibits transcription on chromatin templates. *J. Biol. Chem.* 279: 21866-21872.
7. Bonenfant, D., Coulot, M., Towbin, H., Schindler, P. and van Oostrum, J. 2006. Characterization of Histone H2A and H2B variants and their post-translational modifications by mass spectrometry. *Mol. Cell. Proteomics* 5: 541-552.

## CHROMOSOMAL LOCATION

Genetic locus: HIST1H2AD (human) mapping to 6p22.2.

## PRODUCT

Histone cluster 1 H2AD siRNA (h) 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Histone cluster 1 H2AD shRNA Plasmid (h): sc-105462-SH and Histone cluster 1 H2AD shRNA (h) Lentiviral Particles: sc-105462-V as alternate gene silencing products.

## PROTOCOLS

See our web site at [www.scbt.com](http://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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

Histone cluster 1 H2AD siRNA (h) is recommended for the inhibition of Histone cluster 1 H2AD 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  $\mu$ M in 66  $\mu$ l. 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.