

# Product Datasheet

## Histone H3 [Dimethyl Lys4] Antibody NBP2-59145

Unit Size: 100 ul

Store at -20C. Avoid freeze-thaw cycles.

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**NBP2-59145****Histone H3 [Dimethyl Lys4] Antibody****Product Information**

<b>Unit Size</b>	100 ul
<b>Concentration</b>	Please see the vial label for concentration. If unlisted please contact technical services.
<b>Storage</b>	Store at -20C. Avoid freeze-thaw cycles.
<b>Clonality</b>	Polyclonal
<b>Preservative</b>	0.05% Sodium Azide
<b>Isotype</b>	IgG
<b>Purity</b>	Whole Antiserum
<b>Buffer</b>	Serum
<b>Target Molecular Weight</b>	15 kDa

**Product Description**

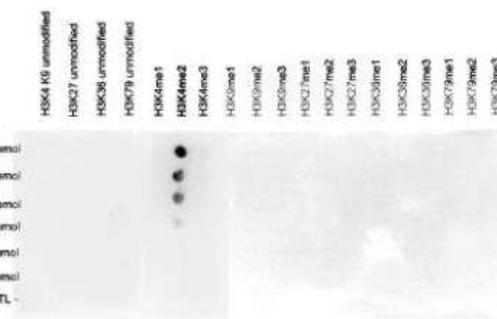
<b>Host</b>	Rabbit
<b>Gene ID</b>	126961
<b>Gene Symbol</b>	H3C14
<b>Species</b>	Human, Mouse
<b>Immunogen</b>	The exact sequence of the immunogen to this Histone H3 [Dimethyl Lys4] antibody is proprietary.

**Product Application Details**

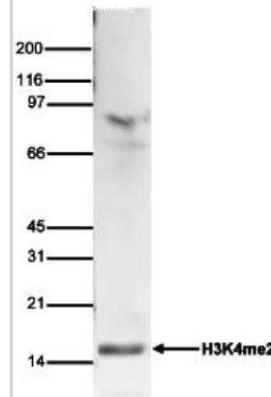
<b>Applications</b>	Western Blot, Chromatin Immunoprecipitation, Dot Blot, ELISA
<b>Recommended Dilutions</b>	Western Blot 1:750, Chromatin Immunoprecipitation 10 uL/IP, ELISA 1:300, Dot Blot 1:20000

## Images

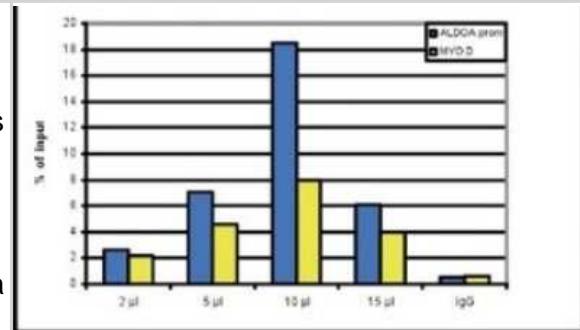
Dot Blot: Histone H3 [Dimethyl Lys4] Antibody [NBP2-59145] - Analysis was performed to test the cross reactivity of the antibody against H3K4me2 with peptides containing other modifications or unmodified sequences of histone H3. Other histone modifications include mono- and trimethylation of the same lysine and mono-, di- and trimethylation of lysine 9, 27 and 36 and 79. 100 to 0.2 pmol of the peptides were spotted on a membrane. The antibody was used at a dilution of 1:20,000. Figure shows a high specificity of the antibody for the modification of interest.



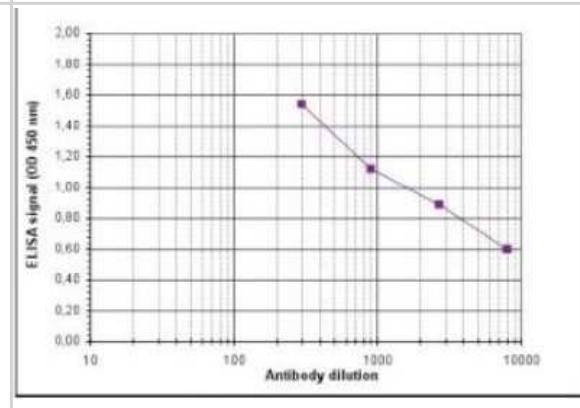
Western Blot: Histone H3 [Dimethyl Lys4] Antibody [NBP2-59145] - Histone extracts of HeLa cells (15 ug) were analyzed using the antibody against H3K4me2 diluted 1:750 in TBS-Tween containing 5% skimmed milk. Observed molecular weight is ~15 kDa.



Chromatin Immunoprecipitation: Histone H3 [Dimethyl Lys4] Antibody [NBP2-59145] - ChIP assays were performed using human osteosarcoma (U2OS) cells, the antibody against H3K4me2 and optimized PCR primer sets for qPCR. Chromatin was sheared. ChIP was performed using sheared chromatin from 1.6 million cells. A titration of the antibody consisting of 2, 5, 10 or 15  $\mu$ l per ChIP experiment was analysed. IgG (5  $\mu$ g/IP) was used as negative IP control. Quantitative PCR was performed with primers for the promoter of the ALDOA gene and for the coding region of the myogenic differentiation gene (MYOD), a gene that is inactive at normal conditions. Figure shows the recovery, expressed as a % of input (the relative amount of immunoprecipitated DNA compared to input DNA after qPCR analysis). These results are in accordance with the observation that dimethylation of K4 at histone H3 is more present at active genes than at silent genes.



ELISA: Histone H3 [Dimethyl Lys4] Antibody [NBP2-59145] - To determine the titer, an ELISA was performed using a serial dilution of the antibody directed against H3K4me2. The antigen used was a peptide containing the histone modification of interest. By plotting the absorbance against the antibody dilution, the titer of the antibody was estimated to be 1:2,600.





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## Limitations

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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