diagenode
Innovating Epigenetic Solutions

H2BS14p monoclonal antibody

Cat. No. C15200186 (MAb-186-050)
Type: Monoclonal
Source: Mouse
Lot #: 001
Size: 50 µg/ 50 µl
Concentration: 1 µg/µl

Specificity: Human: positive
Other species: not tested
Purity: Protein A purified monoclonal antibody in PBS containing 0.05% azide and 0.05% ProClin 300.
Storage: Store at -20°C; for long storage, store at -80°C. Avoid multiple freeze-thaw cycles.
Precautions: This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Description: Monoclonal antibody raised in mouse against histone H2B containing the phosphorylated Serine 14 (H2BS14p), using a KLH-conjugated synthetic peptide.

Applications

	Suggested dilution	Results
ELISA	1:100	Fig 1
Dot blotting	1:2.000	Fig 2
Western blot	1:200	Fig 3

Target description

Histones are present in the chromosomes of eukaryotic cells. They are rich in the amino acids arginine and lysine and have been greatly conserved during evolution. Histones pack the DNA into tight masses of chromatin. Two core histones of each class H2A, H2B, H3 and H4 assemble and are wrapped by 146 base pairs of DNA to form one octameric nucleosome. Histone tails undergo numerous post-translational modifications, which either directly or indirectly alter chromatin structure to facilitate transcriptional activation or repression or other nuclear processes. In addition to the genetic code, combinations of the different histone modifications reveal the so-called "histone code". Histone methylation and demethylation is dynamically regulated by respectively histone methyl transferases and histone demethylases.

Results

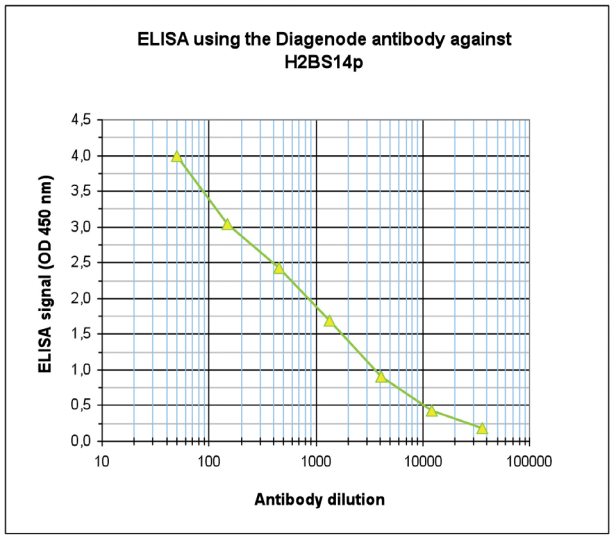

Figure 1. Determination of the antibody titer

To determine the titer of the antibody, an ELISA was performed using a serial dilution of the Diagenode monoclonal antibody against H2BS14p (Cat. No. MAb-186-050).The antigen used was a peptide containing the histone modification of interest. By plotting the absorbance against the antibody dilution (Figure 1), the titer of the antibody was estimated to be 1:2,000.

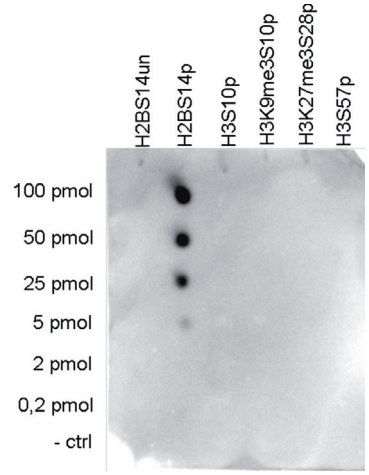

Figure 2. Cross reactivity tests using the Diagenode monoclonal antibody against H2BS14p

To test the cross reactivity of the Diagenode antibody against H2BS14p (Cat. No. MAb-186-050), a Dot Blot analysis was performed with peptides containing other histone phosphorylations and the unmodified H2BS14. One hundred to 0.2 pmol of the respective peptides were spotted on a membrane. The antibody was used at a dilution of 1:2,000. Figure 2 shows a high specificity of the antibody for the modification of interest.

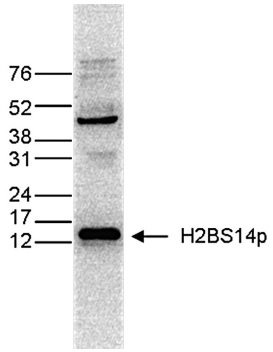

Figure 3. Western blot analysis using the Diagenode antibody directed against H2BS14p

HeLa cells were treated with colcemid to block the cell cycle in metaphase and 15 µg of histone extracts of these cells were analysed by Western blot using the Diagenode antibody against H2BS14p (cat. No. MAb-186-050) diluted 1:200 in TBS-Tween containing 5% skimmed milk. The position of the protein of interest is indicated on the right; the marker (in kDa) is shown on the left.

Diagenode sa. BELGIUM | EUROPE
LIEGE SCIENCE PARK
Rue Bois Saint-Jean, 3
4102 Seraing (Ougrée) - Belgium
Tel: +32 4 364 20 50
Fax: +32 4 364 20 51
orders@diagenode.com
info@diagenode.com

Diagenode Inc. USA | NORTH AMERICA
400 Morris Avenue, Suite 101
Denville, NJ 07834 - USA
Tel: +1 862 209-4680
Fax: +1 862 209-4681
orders.na@diagenode.com
info.na@diagenode.com

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