**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; formed of two H2A-H2B dimers and two H3-H4 dimers, forming two nearly symmetrical halves by tertiary structure. Over 80% of nucleosomes contain the linker Histone H1, derived from an intronless gene, that interacts with linker DNA between nucleosomes and mediates compaction into higher order chromatin. Histones are subject to posttranslational modification by enzymes primarily on their N-terminal tails, but also in their globular domains. Such modifications include methylation, citrullination, acetylation, phosphorylation, sumoylation, ubiquitination and ADP-ribosylation.

**SOURCE**

Histone H1 (AE-4) is a mouse monoclonal antibody raised against leukemia biopsy cells of human origin.

**PRODUCT**

Each vial contains 200 µg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Histone H1 (AE-4) is available conjugated to agarose (sc-8030 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; and to either phycoerythrin (sc-8030 PE), fluorescein (sc-8030 FITC), Alexa Fluor® 488 (sc-8030 AF488) or Alexa Fluor® 647 (sc-8030 AF647), 200 µg/ml, for IF, IHC(P) and FCM. In addition, Histone H1 (AE-4) is available conjugated to either TRITC (sc-8030 TRITC, 200 µg/ml) or Alexa Fluor® 405 (sc-8030 AF405), 100 µg/2 ml, for IF, IHC(P) and FCM.

**APPLICATIONS**

Histone H1 (AE-4) is recommended for detection of Histone H1 of broad species origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 µg per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Histone H1: 32-33 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, LNCaP cell lysate: sc-2231 or HeLa whole cell lysate: sc-2200.

**STORAGE**

Store at 4°C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**RESEARCH USE**

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

**DATA**

Histone H1 (AE-4):sc-8030. Western blot analysis of Histone H1 expression in HL-60 (A) and HeLa (B) whole cell lysates.

Histone H1 (AE-4):sc-8030. Immunofluorescence staining of formalin-fixed A-431 cells showing nuclear localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human oxyte tissue showing nuclear staining of oocytes and ovarian stroma cells (B).

**SELECT PRODUCT CITATIONS**


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**CONJUGATES**

See Histone H1 (H-2): sc-393358 for Histone H1 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.