

## 着丝粒蛋白 A

产品货号： mlR2753

英文名称： CENPA

中文名称： 着丝粒蛋白 A

别 名： CENP A; CENP-A; Centromere autoantigen A; Centromere protein A 17kDa; centromere protein A; centromeric protein A; Histone H3 like centromeric protein A; cenpa; CENPA\_HUMAN; Histone H3-like centromeric protein A.

研究领域： 细胞生物 染色质和核信号 细胞周期蛋白

抗体来源： Rabbit

克隆类型： Polyclonal

交叉反应： Human, Mouse, Rat, Dog, Pig, Cow, Horse, Rabbit,

产品应用： WB=1:500-2000 ELISA=1:500-1000

not yet tested in other applications.

optimal dilutions/concentrations should be determined by the end user.

分 子 量： 15kDa

细胞定位： 细胞核

性 状： Lyophilized or Liquid

浓 度： 1mg/ml

免 疫 原： KLH conjugated synthetic peptide derived from human CENPA:65-140/140

亚 型 : IgG

纯化方法 : affinity purified by Protein A

储 存 液 : 0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.

保存条件 : Store at -20 ° C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20° C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 ° C.

PubMed : PubMed

产品介绍 : Centromeres are the differentiated chromosomal domains that specify the mitotic behavior of chromosomes. CENPA encodes a centromere protein which contains a histone H3 related histone fold domain that is required for targeting to the centromere. CENPA is proposed to be a component of a modified nucleosome or nucleosome-like structure in which it replaces 1 or both copies of conventional histone H3 in the (H3-H4)<sub>2</sub> tetrameric core of the nucleosome particle. Alternative splicing results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq].

#### Function:

Histone H3-like variant which exclusively replaces conventional H3 in the nucleosome core of centromeric chromatin at the inner plate of the kinetochore. Required for recruitment and assembly of kinetochore proteins, mitotic progression and chromosome segregation. May serve as an epigenetic mark that propagates centromere identity through replication and cell division. The CENPA-H4 heterotetramer can bind DNA by itself (in vitro).

#### Subunit:

Forms a nucleosome-like histone octamer containing two molecules each of H2A, H2B, CENPA and H4 assembled in one CENPA-H4 heterotetramer and two H2A-H2B heterodimers. Nucleosomes containing CENPA also contain histone H2A variants such as macroH2A H2AFY and H2A.Z/H2AFZ. The CENPA-H4 heterotetramer is more compact and structurally more rigid than corresponding H3-H4 heterotetramers. Heterotrimer composed of HJURP, CENPA and histone H4, where HJURP interacts with the dimer formed by CENPA and histone H4 and prevents tetramerization of CENPA and H4. Component of the CENPA-NAC complex, at least composed of CENPA,

CENPC, CENPH, CENPM, CENPN, CENPT and MLF1IP/CENPU. Interacts (via CATD domain) with HJURP; the interaction is direct and is required for its localization to centromeres. Interacts with CENPC, CENPN and CENPT; interaction is direct. Interacts directly with herpes virus HSV-1 ICP0 protein. Part of a centromere complex consisting of CENPA, CENPT and CENPW.

**Subcellular Location:**

Nucleus. Chromosome, centromere, kinetochore. Note=Localizes exclusively in the kinetochore domain of centromeres. Occupies a compact domain at the inner kinetochore plate stretching across 2 thirds of the length of the constriction but encompassing only one third of the constriction width and height.

**Tissue Specificity:**

Ubiquitinated (Probable). Interaction with herpes virus HSV-1 ICP0 protein, leads to its degradation by the proteasome pathway.

Phosphorylation of Ser-7 by AURKA and AURKB during prophase is required for localization of AURKA and AURKB at inner centromere and is essential for kinetochore function. Initial phosphorylation during prophase is mediated by AURKA and is maintained by AURKB.

Poly-ADP-ribosylated by PARP1.

**Similarity:**

Belongs to the histone H3 family.

**SWISS:**

P49450

**Gene ID:**

1058

**Important Note:**

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

CENP-A 可将着丝粒变成一个 DNA 和蛋白的复合物，而且确保着丝粒在细胞分裂中完好无损。

CENP-A 的存在确保了人体有几乎完全相同的染色体组。

CENP-A 功能失常将导致细胞分裂过程中发生染色体分离异常。

CENP-A 对于染色体着丝粒的位置起决定作用，因而被认为是重要的表观遗传学标记蛋白。

CENP-A 改变了核小体的性状，使得它变得更加坚硬。核小体是由 DNA 与组蛋白八聚体构成的真核染色体的一种重复结构，核小体的组织对于基因调控极为重要。不同于染色质上的其他区域。

CENP-A 取代组蛋白 H3 形成核小体，CENP-A 核小体重复拷贝形成一个特异的表观遗传区域。