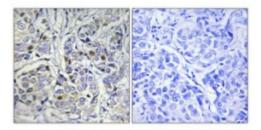


## Anti-CENP-A antibody





Description	Rabbit polyclonal to CENP-A.	

Model STJ92218

**Host** Rabbit

**Reactivity** Human

**Applications** ELISA, IF, IHC

Immunogen Synthesized peptide derived from human CENP-A around the non-

phosphorylation site of S7.

Immunogen Region 1-80 aa

**Gene ID** <u>1058</u>

Gene Symbol CENPA

**Dilution range** IHC 1:100-1:300IF 1:200-1:1000ELISA 1:10000

**Specificity** CENP-A Polyclonal Antibody detects endogenous levels of CENP-A protein.

**Purification** The antibody was affinity-purified from rabbit antiserum by affinity-

chromatography using epitope-specific immunogen.

**Note** For Research Use Only (RUO).

**Protein Name** Histone H3-like centromeric protein A Centromere autoantigen A Centromere

protein A CENP-A

Molecular Weight 15.991 kDa

**Clonality** Polyclonal

**Conjugation** Unconjugated

**Isotype** IgG

**Formulation** Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

**Concentration** 1 mg/ml

**Storage Instruction** Store at -20°C, and avoid repeat freeze-thaw cycles.

Database Links <u>HGNC:1851OMIM:117139</u>

Alternative Names Histone H3-like centromeric protein A Centromere autoantigen A Centromere

protein A CENP-A

**Function** Histone H3-like nucleosomal protein that is specifically found in centromeric

nucleosomes. Replaces conventional H3 in the nucleosome core of

centromeric chromatin at the inner plate of the kinetochore . The presence of CENPA subtly modifies the nucleosome structure and the way DNA is wrapped around the nucleosome and gives rise to protruding DNA ends that are less well-ordered and rigid compared to nucleosomes containing histone H3 . May serve as an epigenetic mark that propagates centromere identity through replication and cell division . Required for recruitment and assembly of kinetochore proteins, and as a consequence required for progress through

mitosis, chromosome segregation and cytokinesis.

**Sequence and Domain Family** The CATD (CENPA targeting domain) region is responsible for the more

compact structure of nucleosomes containing CENPA. It is necessary and

sufficient to mediate the localization into centromeres.

**Cellular Localization** Nucleus Chromosome, centromere, kinetochore Chromosome, centromere.

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 . Phosphorylation at Ser-68 during early mitosis abolishes association with chromatin and centromeres and results in dispersed nuclear

location.

**Post-translational** Ubiquitinated (Probable). Interaction with herpes virus HSV-1 ICP0 protein, **Modifications** leads to its degradation by the proteasome pathway. Trimethylated by NTMT

leads to its degradation by the proteasome pathway. Trimethylated by NTMT1 at the N-terminal glycine after cleavage of Met-1. Methylation is low before incorporation into nucleosomes and increases with cell cycle progression, with the highest levels in mitotic nucleosomes. Phosphorylated by CDK1 at Ser-68

during early mitosis; this abolishes association with chromatin and

centromeres, prevents interaction with HJURP and thereby prevents premature

assembly of CENPA into centromeres . Dephosphorylated at Ser-68 by PPP1CA during late mitosis . 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 normal cytokinesis . Initial

phosphorylation during prophase is mediated by AURKA and is maintained

by AURKB. Poly-ADP-ribosylated by PARP1.