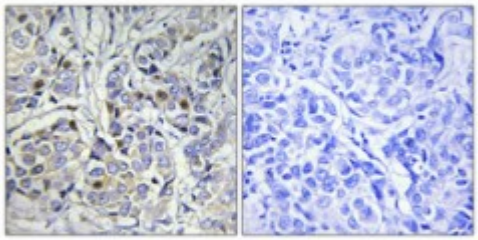
Anti-CENP-A antibody



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	1058
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	HGNC:1851OMIM:117139
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 Modifications	Ubiquitinated (Probable). Interaction with herpes virus HSV-1 ICP0 protein, 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.