

Rabbit anti-Human, Rat CENP-A Polyclonal Antibody | anti-CENPA antibody

Phospho-CENP-A (Ser7) Antibody

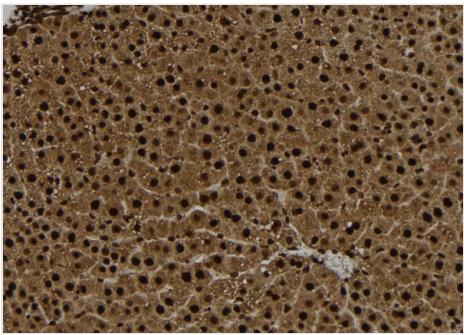
CATALOG # AAA321314	HOST Rabbit	REACTIVITY Human, Rat	APPLICATIONS Immunohistochemistry, Western Blot
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PRODUCT SYNONYMS

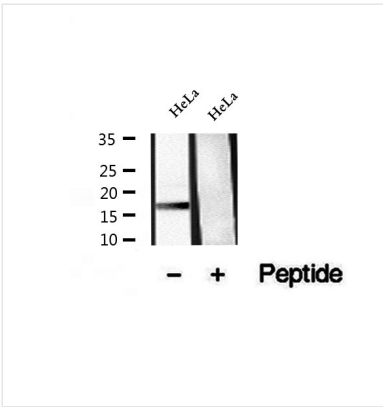
CENP-A; Polyclonal Antibody; Phospho-CENP-A (Ser7) Antibody; CENP A; cenpa; CENPA_HUMAN; Centromere autoantigen A; Centromere protein A 17kDa; Centromere protein A; Histone H3 like centromeric protein A; Histone H3-like centromeric protein A; anti-CENPA antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-CENP-A (Ser7) antibody detects endogenous levels of CENP-A.
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho- and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	114
Applicable Applications for anti-CENPA antibody	IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human CENP-A around the phosphorylation site of Ser7.
Subcellular Location	Nucleus. Chromosome > Centromere > Kinetochore. 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	Expression varies across the cell cycle, with high levels in G2 phase (at the mRNA level).
Predicted Cross Reactivity	Pig, Horse, Rabbit
Similarity	Pig (82%), Horse (90%), Rabbit (91%)
Conjugation	Unconjugated
Epitope	Phospho Ser7
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



IHC (Immunohistochemistry)
AAA321314 at 1/100 staining Rat liver tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



WB (Western Blot)
Western blot analysis of extracts of HeLa, using Phospho-CENP-A (Ser7) Antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-CENPA antibody	Function: Histone H3-like nucleosomal protein that is specifically found in centromeric nucleosomes (PubMed:7962047, PubMed:9024683, PubMed:11756469, PubMed:14667408, PubMed:15702419, PubMed:15475964, PubMed:15282608, PubMed:17651496, PubMed:19114591, PubMed:27499292, PubMed:20739937). Replaces conventional H3 in the nucleosome core of centromeric chromatin at the inner plate of the kinetochore (PubMed:18072184). 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 (PubMed:27499292, PubMed:26878239). May serve as an epigenetic mark that propagates centromere identity through replication and cell division (PubMed:15475964, PubMed:15282608, PubMed:26878239, PubMed:20739937, PubMed:21478274). Required for recruitment and assembly of kinetochore proteins, and as a consequence required for progress through mitosis, chromosome segregation and cytokinesis (PubMed:11756469, PubMed:14667408, PubMed:18072184, PubMed:23818633, PubMed:25556658, PubMed:27499292). Subunit Structure: Component of centromeric nucleosomes, where DNA is wrapped around a histone octamer core (PubMed:23818633, PubMed:26878239, PubMed:20739937, PubMed:21743476). The octamer contains two molecules each of H2A, H2B, CENPA and H4 assembled in one CENPA-H4 heterotetramer and two H2A-H2B heterodimers (PubMed:23818633, PubMed:26878239, PubMed:20739937, PubMed:21743476). CENPA modulates the DNA-binding characteristics of nucleosomes so that protruding DNA ends have higher flexibility than in nucleosomes containing conventional histone H3 (PubMed:27499292, PubMed:21743476). Inhibits binding of histone H1 to nucleosomes, since histone H1 binds preferentially to rigid DNA linkers that protrude from nucleosomes (PubMed:27499292). Nucleosomes containing CENPA also contain histone H2A variants such as macroH2A H2AFY and H2A.Z/H2AFZ (Probable). The CENPA-H4 heterotetramer is more compact and structurally more rigid than corresponding H3-H4 heterotetramers (PubMed:15282608, PubMed:20739937). Can assemble into nucleosomes that contain both CENPA and histone H3.3; these nucleosomes interact with a single CENPC chain (PubMed:25408271). 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 (PubMed:21478274). Component of the CENPA-NAC complex, at least composed of CENPA, CENPC, CENPH, CENPM, CENPN, CENPT and CENPU (PubMed:16622419). Interacts (via CATD domain) with HJURP; the interaction is direct and is required for its localization to centromeres (PubMed:15282608, PubMed:19410544, PubMed:19410545, PubMed:23818633, PubMed:25556658). Interacts with CENPC, CENPN and CENPT; interaction is direct. Part of a centromere complex consisting of CENPA, CENPT and CENPW (PubMed:19533040). Identified in centromere complexes containing histones H2A, H2B and H4, and at least CENPA, CENPB, CENPC, CENPT, CENPN, HJURP, SUPT16H, SSRP1 and RSF1 (PubMed:27499292). Can self-associate (PubMed:9024683). The CENPA-H4 heterotetramer can bind DNA by itself (in vitro) (PubMed:20739937). Interacts with CDK1, PPP1CA and RBBP7 (PubMed:25556658). Interacts directly with herpes virus HSV-1 ICP0 protein (PubMed:11053442). 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 (PubMed:25556658). Dephosphorylated at Ser-68 by PPP1CA during late mitosis (PubMed:25556658). 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 (PubMed:11756469, PubMed:14667408, PubMed:18239465). Initial phosphorylation during prophase is mediated by AURKA and is maintained by AURKB. Poly-ADP-ribosylated by PARP1. Similarity: The CATD (CENPA targeting domain) region is responsible for the more compact structure of nucleosomes containing CENPA (PubMed:15282608). It is necessary and sufficient to mediate the localization into centromeres (PubMed:7962047, PubMed:15282608). Belongs to the histone H3 family.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	109637779
NCBI GeneID	1058
NCBI Accession #	NP_001035891.1
NCBI GenBank Nucleotide #	NM_001042426.1
UniProt Accession #	P49450; Q53T74; Q9BVW2; D6W544
Molecular Weight	Observed: 17 kDa Predicted: 16 kDa

NCBI Official Full Name	histone H3-like centromeric protein A isoform b
NCBI Official Synonym Full Names	centromere protein A
NCBI Official Symbol	CENPA
NCBI Official Synonym Symbols	CenH3; CENP-A
NCBI Protein Information	histone H3-like centromeric protein A
UniProt Protein Name	Histone H3-like centromeric protein A
UniProt Gene Name	CENPA
UniProt Synonym Gene Names	CENP-A

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/cenp-a-antibody-immunohistochemistry-western-blot-elisa/321314>