

CENP-A (Phospho Ser7) Rabbit pAb

CatalogNo: YP1172

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse, Rat

Applications

- IF, ELISA

MW

- 16kD (Calculated)

Isotype

- IgG

Storage

Storage* -15°C to -25°C/1 year (Do not lower than -25°C)

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

Recommended Dilution Ratios

IF 1:200-1:1000

ELISA 1:10000

Not yet tested in other applications

Basic Information

Clonality Polyclonal

Immunogen Information

Immunogen The antiserum was produced against synthesized peptide derived from human Centromeric Protein A around the phosphorylation site of Ser7. AA range:1-50

Specificity Phospho-CENP-A (S7) Polyclonal Antibody detects endogenous levels of CENP-A protein only when phosphorylated at S7. The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):RRSRK

| Target Information

Gene name CENPA

Protein Name Histone H3-like centromeric protein A

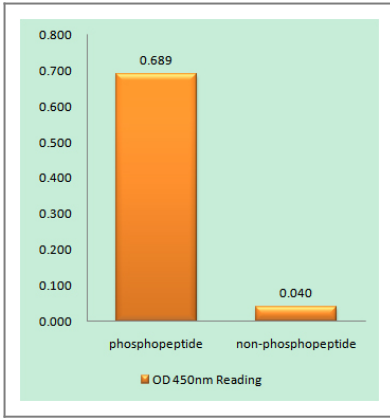
Organism	Gene ID	UniProt ID
Human	1058 ;	P49450 ;
Mouse		O35216 ;

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 (PubMed:19114591). Phosphorylation at Ser-68 during early mitosis abolishes association with chromatin and centromeres and results in dispersed nuclear location (PubMed:25556658). .

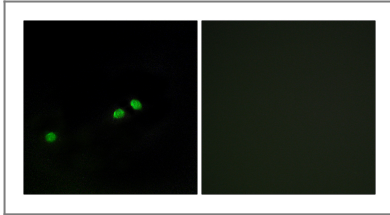
Tissue specificity Epithelium,Uterus,

Function Disease:Antibodies against CENPA are present in sera from patients with autoimmune diseases that developed autoantibodies against centrosomal proteins.,Domain:The CATD (CENPA targeting domain) region is responsible for the more compact structure of nucleosomes containing CENPA and is necessary and sufficient to mediate the localization into centromeres.,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.,PTM:Phosphorylation of Ser-7 by Aurora-A/STK6 and Aurora-B/STK12 during prophase is required for localization of Aurora-A/STK6 and Aurora-B/STK12 at inner centromere and is essential for kinetochore function. Initial phosphorylation during prophase is mediated by Aurora-A/STK6 and is maintained by Aurora-B/STK12.,PTM:Ubiquitinated (Probable). Interaction with herpes virus HSV-1 ICP0 protein, leads to its degradation by the proteasome pathway.,similarity:Belongs to the histone H3 family.,subcellular location:Localizes exclusively in the kinetochore domain of centromeres.,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. 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 directly with herpes virus HSV-1 ICP0 protein.,

| Validation Data



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using Centromeric Protein A (Phospho-Ser7) Antibody



Immunofluorescence analysis of HeLa cells, using Centromeric Protein A (Phospho-Ser7) Antibody. The picture on the right is blocked with the phospho peptide.

Contact information

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CENP-A (Phospho Ser7) Rabbit pAb

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