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CAPD2 Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP58729

Specification

CAPD2 Polyclonal Antibody - Product Information

Application	**WB, IHC-P, IHC-F, IF, E**
Primary Accession	Q15021
Reactivity	**Rat, Dog, Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**157 KDa**
Physical State	**Liquid**
Immunogen	**KLH conjugated synthetic peptide derived from human CAPD2/CNAP1**
Epitope Specificity	**1101-1300/1401**
Isotype	**IgG**
Purity affinity purified by Protein A	
Buffer	**0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.**
SUBCELLULAR LOCATION	**Nucleus. Cytoplasm. Chromosome. Note=In interphase cells, the majority of the condensin complex is found in the cytoplasm, while a minority of the complex is associated with chromatin. A subpopulation of the complex however remains associated with chromosome foci in interphase cells. During mitosis, most of the condensin complex is associated with the chromatin. At the onset of prophase, the regulatory subunits of the complex are phosphorylated by CDK1, leading to condensin's association with chromosome arms and to chromosome condensation. Dissociation from chromosomes is observed in late telophase.**
SIMILARITY	**Belongs to the CND1 (condensin subunit 1) family.**
SUBUNIT	**Component of the condensin complex, which contains the SMC2 and SMC4 heterodimer, and three non SMC subunits that probably regulate the complex: NCAPH/BRRN1, NCAPD2/CAPD2 and NCAPG. Interacts with histones H1 and H3.**
Post-translational modifications	**Phosphorylated by CDK1. Its phosphorylation, as well as that of NCAPH and NCAPG subunits, activates the condensin complex and is required for chromosome condensation (By similarity).**

Important Note

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

Background Descriptions
CAPD2 is a regulatory subunit of the condensin complex, a complex required for conversion of interphase chromatin into mitotic-like condensed chromosomes. The condensin complex probably introduces positive supercoils into relaxed DNA in the presence of type I topoisomerases and converts nicked DNA into positive knotted forms in the presence of type II topoisomerases. It may target the condensin complex to DNA via its C-terminal domain (referenced from Swissprot).

CAPD2 Polyclonal Antibody - Additional Information

Gene ID 9918

Other Names
Condensin complex subunit 1, Chromosome condensation-related SMC-associated protein 1, Chromosome-associated protein D2, hCAP-D2, Non-SMC condensin I complex subunit D2, XCAP-D2 homolog, NCAPD2 {ECO:0000303|PubMed:27737959, ECO:0000312|HGNC:HGNC:24305}

Dilution
WB~~1:1000<br \>IHC-P~~N/A<br \>IHC-F~~N/A<br \>IF~~1:50~200<br \>E~~N/A

Format
0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

Storage
Store at -20 ℃ for one year. Avoid repeated freeze/thaw cycles. 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 ℃.

CAPD2 Polyclonal Antibody - Protein Information

Name NCAPD2 {ECO:0000303|PubMed:27737959, ECO:0000312|HGNC:HGNC:24305}

Function
Regulatory subunit of the condensin complex, a complex required for conversion of interphase chromatin into mitotic-like condense chromosomes. The condensin complex probably introduces positive supercoils into relaxed DNA in the presence of type I topoisomerases and converts nicked DNA into positive knotted forms in the presence of type II topoisomerases. May target the condensin complex to DNA via its C-terminal domain (PubMed:11136719). May promote the resolution of double-strand DNA catenanes (intertwines) between sister chromatids. Condensin-mediated compaction likely increases tension in catenated sister chromatids, providing directionality for type II topoisomerase-mediated strand exchanges toward chromatid decatenation. Required for decatenation of non-centromeric ultrafine DNA bridges during anaphase. Early in neurogenesis, may play an essential role to ensure accurate mitotic chromosome condensation in neuron stem cells, ultimately affecting neuron pool and cortex size (PubMed:27737959).

Cellular Location
Nucleus. Cytoplasm. Chromosome. Note=In interphase cells, the majority of the condensin

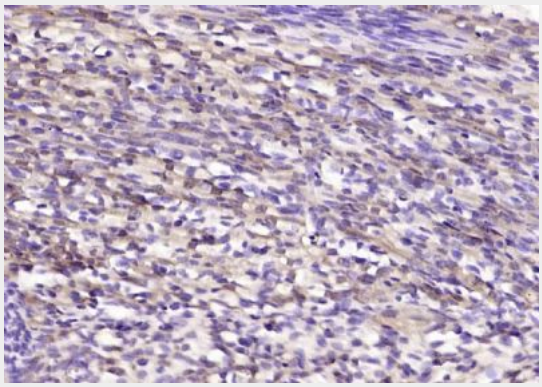
complex is found in the cytoplasm, while a minority of the complex is associated with chromatin. A subpopulation of the complex however remains associated with chromosome foci in interphase cells. During mitosis, most of the condensin complex is associated with the chromatin. At the onset of prophase, the regulatory subunits of the complex are phosphorylated by CDK1, leading to condensin's association with chromosome arms and to chromosome condensation. Dissociation from chromosomes is observed in late telophase

CAPD2 Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CAPD2 Polyclonal Antibody - Images



Paraformaldehyde-fixed, paraffin embedded (mouse embryo); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (CAPD2) Polyclonal Antibody, Unconjugated (bs-7718R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.