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Anti-CP110 Picoband Antibody

Catalog # ABO13042

Product Information

Application	WB, IHC-P, E
Primary Accession	O43303
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for CP110 detection. Tested with WB, IHC-P, Direct ELISA in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	9738
Other Names	Centriolar coiled-coil protein of 110 kDa, Centrosomal protein of 110 kDa, CP110, Cep110, CCP110, CEP110, CP110, KIAA0419
Calculated MW	113424
Application Details	Western blot, 0.1-0.5 □g/ml Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml Direct ELISA, 0.1-0.5 □g/ml
Subcellular Localization	Cytoplasm, cytoskeleton, microtubule organizing center, centrosome, centriole.
Tissue Specificity	Highly expressed in testis. Detected at intermediate levels in spleen, thymus, prostate, small intestine, colon and peripheral blood leukocytes.
Source	Eukaryota
Contents	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg NaN_3.
Immunogen	E. coli-derived human CP110 recombinant protein (Position: E51-H284).
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20˚C; for one year. After r˚Constitution, at 4˚C; for one month. It˚Can also be aliquotted and stored frozen at -20˚C; for a longer time. Avoid repeated freezing and thawing.

Protein Information

Name	CCP110
Synonyms	CEP110, CP110, KIAA0419
Function	Necessary for centrosome duplication at different stages of procentriole formation. Acts as a key negative regulator of ciliogenesis in collaboration with CEP97 by capping the mother centriole thereby preventing cilia formation (PubMed:17681131, PubMed:17719545, PubMed:23486064, PubMed:30375385, PubMed:35301795). Also involved in promoting ciliogenesis. May play a role in the assembly of the mother centriole subdistal appendages (SDA) thereby effecting the fusion of recycling endosomes to basal bodies during cilia formation (By similarity). Required for correct spindle formation and has a role in regulating cytokinesis and genome stability via cooperation with CALM1 and CETN2 (PubMed:16760425).
Cellular Location	Cytoplasm, cytoskeleton, microtubule organizing center, centrosome, centriole. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, cilium basal body {ECO:0000250|UniProtKB:Q7TSH4} Note=Recruited early and then associates with the growing distal tips Recruited to the mother centriole by KIF24 (PubMed:21620453). Removed from centrioles by TTBK2, leading to initiation of ciliogenesis and localizes only to the daughter centriole in ciliated cells. In cytotoxic T lymphocytes remains associated with the mother centriole during docking of the centrosome at the immunological synapse upon target contact (By similarity). Recruited at the distal end of the mother centriole by MPHOSPH9 (PubMed:30375385) {ECO:0000250|UniProtKB:Q7TSH4, ECO:0000269|PubMed:21620453, ECO:0000269|PubMed:30375385}
Tissue Location	Highly expressed in testis. Detected at intermediate levels in spleen, thymus, prostate, small intestine, colon and peripheral blood leukocytes.

Background

Centriolar coiled-coil protein of 110 kDa also known as centrosomal protein of 110 kDa or CP110 is a protein that in humans is encoded by the CCP110 gene. This gene is mapped to chromosome 16p12.3. It is a cell cycle-dependent CDK substrate and regulates centrosome duplication. CP110 suppresses a cilia assembly program. CCP110 functions in a protein complex that participates in the transition of centrioles from basal body function to centrosomal function.

Images

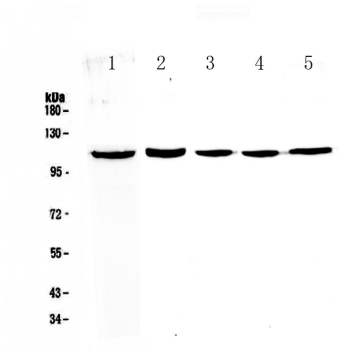


Figure 1. Western blot analysis of CP110 using anti-CP110 antibody (ABO13042). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: human Hela cell lysates, Lane 2: rat testis tissue lysates,Lane 3: mouse testis tissue lysates,Lane 4: mouse spleen tissue lysates,Lane 5: mouse thymus tissue lysates.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane

was incubated with rabbit anti-CP110 antigen affinity purified polyclonal antibody (Catalog # ABO13042) at 0.5 μg/mL overnight at 4 °C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for CP110 at approximately 110KD. The expected band size for CP110 is at 113KD.

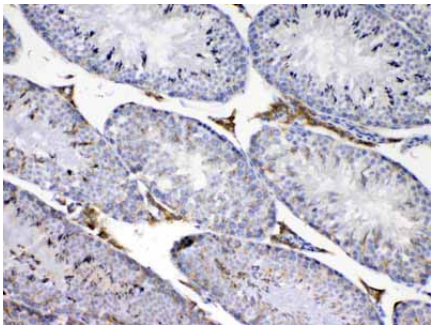


Figure 2. IHC analysis of CP110 using anti-CP110 antibody (ABO13042).CP110 was detected in paraffin-embedded section of mouse testis tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μg/ml rabbit anti-CP110 Antibody (ABO13042) overnight at 4 °C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 °C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

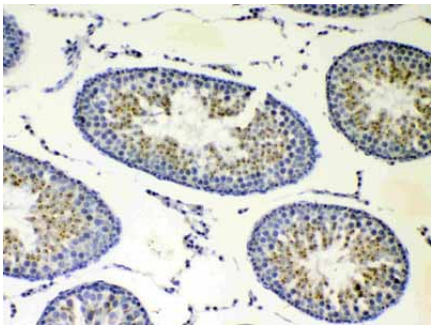


Figure 3. IHC analysis of CP110 using anti-CP110 antibody (ABO13042).CP110 was detected in paraffin-embedded section of rat testis tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μg/ml rabbit anti-CP110 Antibody (ABO13042) overnight at 4 °C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 °C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.