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MCRS1/p78 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP57232

Product Information

Application	WB, IHC-P, IHC-F, IF, ICC, E
Primary Accession	Q96EZ8
Reactivity	Rat, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	51803

Additional Information

Gene ID	10445
Other Names	Microspherule protein 1, 58 kDa microspherule protein, Cell cycle-regulated factor p78, INO80 complex subunit J, MCRS2, MCRS1, INO80Q, MSP58
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C 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 °C.

Protein Information

Name	MCRS1
Synonyms	INO80Q, MSP58
Function	Modulates the transcription repressor activity of DAXX by recruiting it to the nucleolus (PubMed:11948183). As part of the NSL complex, may be involved in acetylation of nucleosomal histone H4 on several lysine residues (PubMed:20018852). Putative regulatory component of the chromatin remodeling INO80 complex which is involved in transcriptional regulation, DNA replication and probably DNA repair. May also be an inhibitor of TERT telomerase activity (PubMed:15044100). Binds to G-quadruplex structures in mRNA (PubMed:16571602). Binds to RNA homomer poly(G) and poly(U) (PubMed:16571602). Maintains RHEB at the lysosome in its active GTP-bound form and prevents its interaction with the mTORC1 complex inhibitor TSC2, ensuring activation of the mTORC1 complex by RHEB (PubMed:25816988). Stabilizes the minus ends of kinetochore fibers by protecting them from depolymerization, ensuring functional spindle assembly during mitosis (PubMed:22081094, PubMed:27192185). Following phosphorylation by TTK/MPS1, enhances recruitment of KIF2A to the minus ends of mitotic

spindle microtubules which promotes chromosome alignment (PubMed:30785839). Regulates the morphology of microtubule minus ends in mitotic spindle by maintaining them in a closed conformation characterized by the presence of an electron-dense cap (PubMed:36350698). Regulates G2/M transition and spindle assembly during oocyte meiosis (By similarity). Mediates histone modifications and transcriptional regulation in germinal vesicle oocytes which are required for meiotic progression (By similarity). Also regulates microtubule nucleation and spindle assembly by activating aurora kinases during oocyte meiosis (By similarity). Contributes to the establishment of centriolar satellites and also plays a role in primary cilium formation by recruiting TTBK2 to the mother centriole which is necessary for removal of the CP110 cap from the mother centriole, an early step in ciliogenesis (PubMed:27263857). Required for epiblast development during early embryogenesis (By similarity). Essential for cell viability (PubMed:16547491).

Cellular Location

Nucleus. Nucleus, nucleolus Cytoplasm Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, spindle pole. Chromosome, centromere, kinetochore. Chromosome {ECO:0000250|UniProtKB:Q99L90}. Lysosome Cytoplasm, cytoskeleton, microtubule organizing center, centrosome, centriolar satellite. Note=Predominantly concentrated in the nucleus but also localizes to the centrosome (PubMed:16547491). Detected on the spindle poles during mitosis from prometaphase to telophase (PubMed:16547491). Found in microspherules in the nucleolus (PubMed:9654073). Localizes to lysosomes under high amino acid concentration conditions (PubMed:25816988). Localizes to the minus ends of kinetochore fibers and chromosomal microtubules (PubMed:22081094). Present in the nucleus of germinal vesicle oocytes and associates with spindles poles and chromosomes after germinal vesicle breakdown (By similarity). {ECO:0000250|UniProtKB:Q99L90, ECO:0000269|PubMed:16547491, ECO:0000269|PubMed:22081094, ECO:0000269|PubMed:25816988, ECO:0000269|PubMed:9654073}

Tissue Location

Detected in testis, and at lower levels in spleen, thymus, prostate, uterus, small intestine, colon and leukocytes

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