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MAK Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7542b

Product Information

Application	WB, IHC-P, E
Primary Accession	P20794
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB3342
Calculated MW	70581
Antigen Region	578-608

Additional Information

Gene ID	4117
Other Names	Serine/threonine-protein kinase MAK, Male germ cell-associated kinase, MAK
Target/Specificity	This MAK antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 578-608 amino acids from the C-terminal region of human MAK.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	MAK Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MAK
Function	Essential for the regulation of ciliary length and required for the long-term survival of photoreceptors (By similarity). Phosphorylates FZR1 in a cell cycle-dependent manner. Plays a role in the transcriptional coactivation of AR. Could play an important function in spermatogenesis. May play a role in chromosomal stability in prostate cancer cells.

Cellular Location	Nucleus. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, spindle Midbody. Cell projection, cilium, photoreceptor outer segment. Photoreceptor inner segment. Note=Localized in both the connecting cilia and the outer segment axonemes (By similarity) Localized uniformly in nuclei during interphase, to the mitotic spindle and centrosomes during metaphase and anaphase, and also to midbody at anaphase until telophase.
Tissue Location	Expressed in prostate cancer cell lines at generally higher levels than in normal prostate epithelial cell lines Isoform 1 is expressed in kidney, testis, lung, trachea, and retina Isoform 2 is retina-specific where it is expressed in rod and cone photoreceptors.

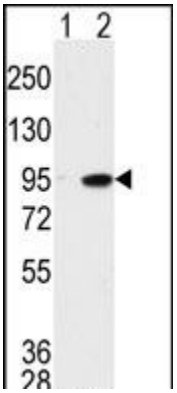
Background

MAK is a serine/threonine protein kinase related to kinases involved in cell cycle regulation. It is expressed almost exclusively in the testis, primarily in germ cells. Studies of the mouse and rat homologs have localized the kinase to the chromosomes during meiosis in spermatogenesis, specifically to the synaptonemal complex that exists while homologous chromosomes are paired. There is, however, a study of the mouse homolog that has identified high levels of expression in developing sensory epithelia so its function may be more generalized.

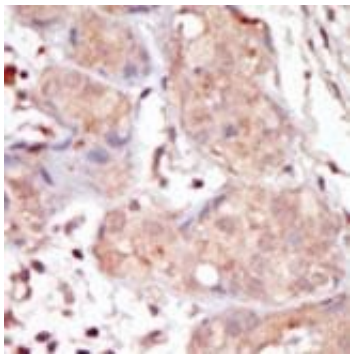
References

Xia, L., et al., J. Biol. Chem. 277(38):35422-35433 (2002). Taketo, M., et al., Genomics 19(2):397-398 (1994). Jinno, A., et al., Mol. Cell. Biol. 13(7):4146-4156 (1993). Bladt, F., et al., Differentiation 53(2):115-122 (1993). Koji, T., et al., Cell Biochem. Funct. 10(4):273-279 (1992).

Images

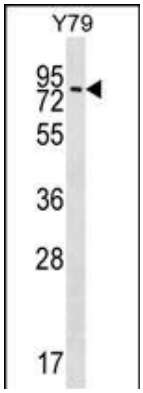


Western blot analysis of MAK (arrow) using MAK Antibody (C-term) (Cat.#AP7542b). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the MAK gene (Lane 2) (Origene Technologies).



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

MAK Antibody (T593) (Cat. #AP7542b) western blot analysis in Y79 cell line lysates (35ug/lane).This



demonstrates the MAK antibody detected the MAK protein (arrow).

Citations

- Loss of Retinitis Pigmentosa 2 (RP2) protein affects cone photoreceptor sensory cilium elongation in mice.
- Exome sequencing and analysis of induced pluripotent stem cells identify the cilia-related gene male germ cell-associated kinase (MAK) as a cause of retinitis pigmentosa.