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Cytokeratin 18 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1227a

Product Information

Application	WB, IHC, E
Primary Accession	P05783
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	4D11E4
Isotype	IgG2b
Calculated MW	48058
Description	Cytokeratin 18, also known as CK18, CYK18, KRT18. Entrez Protein NP_000215. It encodes the type I intermediate filament chain keratin 18. Keratin 18, together with its filament partner keratin 8, are perhaps the most commonly found members of the intermediate filament gene family. They are expressed in single layer epithelial tissues of the body. Mutations in this gene have been linked to cryptogenic cirrhosis. Two transcript variants encoding the same protein have been found for this gene.
Immunogen	Purified recombinant fragment of human Cytokeratin 18 (aa391-483) expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	3875
Other Names	Keratin, type I cytoskeletal 18, Cell proliferation-inducing gene 46 protein, Cytokeratin-18, CK-18, Keratin-18, K18, KRT18, CYK18
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Cytokeratin 18 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	KRT18 (HGNC:6430)

Synonyms	CYK18
Function	Structural component of intermediate filaments in simple epithelial cells. Forms intermediate filaments by heterodimerizing with the type II keratin KRT8, providing mechanical stability and resilience to epithelial cells (PubMed:15529338, PubMed:26823019). Involved in ARHGEF40-mediated actin stress fiber formation and tensional force- induced stress fiber formation and reinforcement (PubMed:26823019). Integrates into the intermediate filament network of skeletal muscle fibers alongside desmin and KRT19, contributing to force transmission (By similarity). Organization and orientation of KRT8/KRT18 filaments are responsible for the properly elongated morphology of epithelial tubules (By similarity). Also acts downstream of ROCK kinase activation as part of a positive feedback mechanism in response to cellular mechanical stress loading (PubMed:26823019). Involved in the uptake of thrombin-antithrombin complexes by hepatic cells (By similarity). When phosphorylated, plays a role in filament reorganization (PubMed:7523419, PubMed:8522591, PubMed:9298992, PubMed:9524113). Involved in the delivery of mutated CFTR to the plasma membrane (PubMed:15529338, PubMed:16424149). Involved in interleukin-6 (IL-6)- mediated barrier protection (PubMed:17213200).
Cellular Location	Nucleus matrix {ECO:0000250|UniProtKB:Q5BJY9}. Cytoplasm, perinuclear region. Nucleus, nucleolus. Cytoplasm {ECO:0000250|UniProtKB:Q5BJY9}
Tissue Location	Expressed in colon, placenta, liver and very weakly in exocervix. Increased expression observed in lymph nodes of breast carcinoma.

References

1. Cancer Genet Cytogenet. 2007 Oct 15;178(2):94-103. 2. J Mol Histol. 2008 Apr;39(2):209-16.

Images

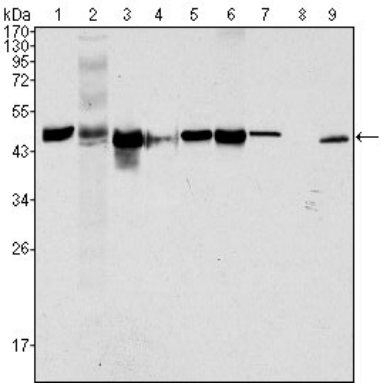
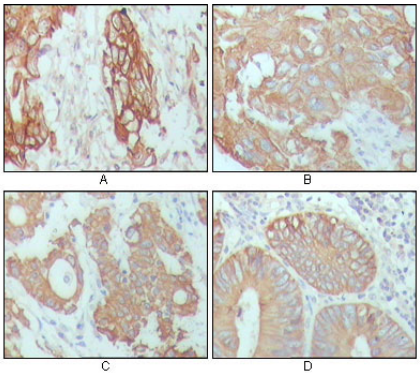


Figure 1: Western blot analysis using CK18 mouse mAb against Hela (1), NIH/3T3 (2), A549 (3), Jurkat (4), MCF-7(5), HepG2 (6), A431 (7), HEK293 (8) and K562 (9) cell lysate.

Figure 2: Immunohistochemical analysis of paraffin-embedded human breast carcinoma (A), hepatocarcinoma (B), stomach cancer (C) and colon cancer tissue (D), showing cytoplasmic location with DAB staining using CK18 mouse mAb.



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