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ILK Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1763a

Product Information

Application	WB, IHC, FC, E
Primary Accession	Q13418
Reactivity	Human, Mouse, Monkey
Host	Mouse
Clonality	Monoclonal
Clone Names	3A9
Isotype	IgG1
Calculated MW	51419
Description	Transduction of extracellular matrix signals through integrins influences intracellular and extracellular functions, and appears to require interaction of integrin cytoplasmic domains with cellular proteins. Integrin-linked kinase (ILK), interacts with the cytoplasmic domain of beta-1 integrin. This gene encodes a serine/threonine protein kinase with 4 ankyrin-like repeats, which associates with the cytoplasmic domain of beta integrins and acts as a proximal receptor kinase regulating integrin-mediated signal transduction. Multiple alternatively spliced transcript variants encoding the same protein have been found for this gene.
Immunogen	Purified recombinant fragment of human ILK (AA: 97-244) expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	3611
Other Names	Integrin-linked protein kinase, 2.7.11.1, 59 kDa serine/threonine-protein kinase, ILK-1, ILK-2, p59ILK, ILK, ILK1, ILK2
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 E~~1/10000
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	ILK Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ILK (HGNC:6040)
Function	Scaffold protein which mediates protein-protein interactions during a range of cellular events including focal adhesion assembly, cell adhesion and cell migration (PubMed:17420447, PubMed:20005845, PubMed:30367047, PubMed:32528174). Regulates integrin-mediated signal transduction by contributing to inside-out integrin activation (By similarity). Recruits PARVA and LIMS1/PITCH to form the heterotrimeric IPP (ILK-PINCH-PARVIN) complex which binds to F-actin via the C- terminal tail of LIMS1 and the N-terminal region of PARVA, promoting F- actin filament bundling, a process required to generate force for actin cytoskeleton reorganization and subsequent dynamic cell adhesion events such as cell spreading and migration (PubMed:30367047). Binding to PARVA promotes effective assembly of ILK into focal adhesions while PARVA-bound ILK can simultaneously engage integrin-beta cytoplasmic tails to mediate cell adhesion (PubMed:20005845). Plays a role with PARVG in promoting the cell adhesion and spreading of leukocytes (PubMed:16517730). Acts as an upstream effector of both AKT1/PKB and GSK3 (PubMed:9736715). Mediates trafficking of caveolae to the cell surface in an ITGB1-dependent manner by promoting the recruitment of IQGAP1 to the cell cortex which cooperates with its effector DIAPH1 to locally stabilize microtubules and allow stable insertion of caveolae into the plasma membrane (By similarity). Required for the maintenance of mitotic spindle integrity by promoting phosphorylation of TACC3 by AURKA (PubMed:18283114). Associates with chromatin and may act as a negative regulator of transcription when located in the nucleus (PubMed:17420447).
Cellular Location	Cell junction, focal adhesion. Cell membrane; Peripheral membrane protein; Cytoplasmic side. Cell projection, lamellipodium {ECO:0000250|UniProtKB:O55222}. Cytoplasm, myofibril, sarcomere. Cytoplasm Nucleus. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cell cortex {ECO:0000250|UniProtKB:O55222}
Tissue Location	Highly expressed in heart followed by skeletal muscle, pancreas and kidney. Weakly expressed in placenta, lung and liver

References

1.Surgery. 2011 Aug;150(2):162-8.2.Int J Cancer. 2012 Feb 1;130(3):521-31.

Images

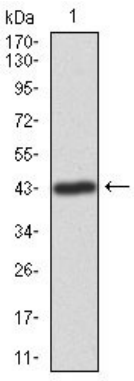
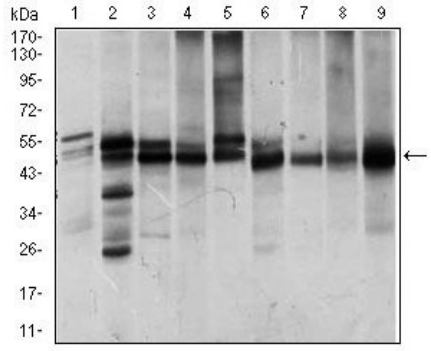


Figure 1: Western blot analysis using ILK mAb against human ILK recombinant protein. (Expected MW is 42.7 kDa)

Figure 2: Western blot analysis using ILK mouse mAb against Jurkat (1), NIH3T3 (2), HeLa (3), PC-12 (4), C6 (5), COS7 (6), Raji (7), K562 (8) and MCF-7 (9) cell lysate.



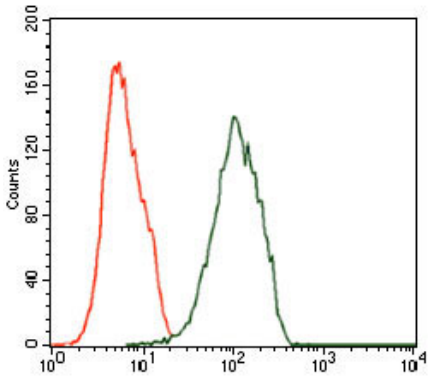


Figure 3: Flow cytometric analysis of Jurkat cells using ILK mouse mAb (green) and negative control (red).

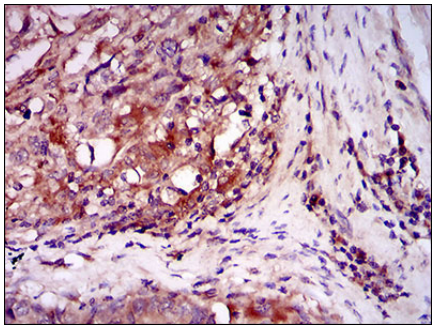


Figure 4: Immunohistochemical analysis of paraffin-embedded esophageal cancer tissues using ILK mouse mAb with DAB staining.

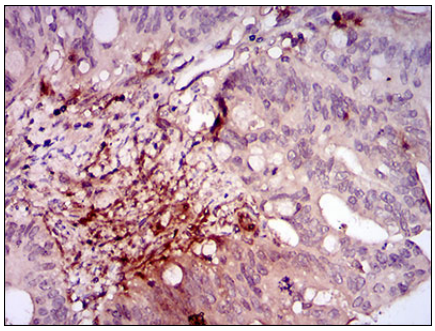


Figure 5: Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using ILK mouse mAb with DAB staining.