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ILK1/ILK2 Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP7651a

Specification

ILK1/ILK2 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession O55222

ILK1/ILK2 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 16202

Other Names
Integrin-linked protein kinase, Ilk

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7651a was selected from the N-term region of human ILK1 . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

ILK1/ILK2 Antibody (N-term) Blocking Peptide - Protein Information

Name Ilk {ECO:0000312|MGI:MGI:1195267}

Function
Scaffold protein which mediates protein-protein interactions during a range of cellular events including focal adhesion assembly, cell adhesion and cell migration (By similarity). 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 (By similarity). 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 (By similarity). Plays a role with PARVG in promoting the cell adhesion and spreading of leukocytes (By similarity). Acts as an upstream effector of both AKT1/PKB and GSK3 (By similarity). 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 (PubMed:20951348). Required for the maintenance of mitotic spindle integrity by promoting phosphorylation of TACC3 by AURKA (By similarity). Associates with chromatin and may act as a negative regulator of transcription when located in the nucleus (By similarity).

Cellular Location
Cell junction, focal adhesion. Cell membrane; Peripheral membrane protein; Cytoplasmic side {ECO:0000250|UniProtKB:Q13418}. Cytoplasm, myofibril, sarcomere {ECO:0000250|UniProtKB:Q13418}. Cell projection, lamellipodium. Cytoplasm {ECO:0000250|UniProtKB:Q13418}. Nucleus {ECO:0000250|UniProtKB:Q13418} Cytoplasm, cytoskeleton, microtubule organizing center, centrosome {ECO:0000250|UniProtKB:Q13418}. Cytoplasm, cell cortex {ECO:0000250|UniProtKB:Q13418}

Tissue Location
Highly expressed in lung, heart, kidney, liver, brain, spleen and skeletal muscle. Weakly expressed in testis

ILK1/ILK2 Antibody (N-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

ILK1/ILK2 Antibody (N-term) Blocking Peptide - Images

ILK1/ILK2 Antibody (N-term) Blocking Peptide - Background

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. ILK encodes a predicted 451-amino acid protein, with an apparent molecular weight of 59 kD. The ILK protein is a serine/threonine protein kinase with 4 ankyrin-like repeats. ILK regulates integrin-mediated signal transduction.

ILK1/ILK2 Antibody (N-term) Blocking Peptide - References

Li, Y., et al., J. Clin. Invest. 112(4):503-516 (2003).Troussard, A.A., et al., J. Biol. Chem. 278(25):22374-22378 (2003).Marotta, A., et al., Br. J. Cancer 88(11):1755-1762 (2003).Cordes, N., et al., Br. J. Cancer 88(9):1470-1479 (2003).Fukuda, T., et al., J. Cell Biol. 160(7):1001-1008 (2003).