SANTA CRUZ BIOTECHNOLOGY, INC.

ILK (65.1): sc-20019

The Power to Question

BACKGROUND

Integrins are heterodimers composed of non-covalently associated transmembrane α and β subunits. The 16 α and 8 β subunits heterodimerize to produce more than 20 different receptors. Most integrin receptors bind to ligands that are components of the extracellular matrix. Certain integrins can also bind to soluble ligands such as Fibrinogen, or to counterreceptors on adjacent cells, such as the intracellular adhesion molecules (ICAMs), leading to aggregation of cells. In addition to mediating cell adhesion and cytoskeletal organization, integrins function as signaling receptors. Signals transduced by integrins play a role in many biological processes, including cell growth, differentiation, migration and apoptosis. ILK (integrin-linked kinase) was identified as a serine/threonine kinase that phosphorylates β1 and β3 Integrins. ILK expression has been shown to be reduced in response to Fibronectin, a known integrin ligand. Overexpression of ILK was shown to upregulate the Fibronectin matrix assembly in epithelial cells, indicating a potential role for ILK in cell growth, cell survival and tumorigenesis.

CHROMOSOMAL LOCATION

Genetic locus: ILK (human) mapping to 11p15.4; Ilk (mouse) mapping to 7 E3.

SOURCE

XIAP (65.1) is a mouse monoclonal antibody raised against full-length recombinant ILK-1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ILK (65.1) is available conjugated to agarose (sc-20019 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-20019 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-20019 PE), fluorescein (sc-20019 FITC), Alexa Fluor® 488 (sc-20019 AF488), Alexa Fluor® 546 (sc-20019 AF546), Alexa Fluor® 594 (sc-20019 AF594) or Alexa Fluor® 647 (sc-20019 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-20019 AF680) or Alexa Fluor® 790 (sc-20019 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

XIAP (65.1) is recommended for detection of ILK-1 and ILK-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ILK siRNA (h): sc-35666, ILK siRNA (m): sc-35667, ILK shRNA Plasmid (h): sc-35666-SH, ILK shRNA Plasmid (m): sc-35667-SH, ILK shRNA (h) Lentiviral Particles: sc-35666-V and ILK shRNA (m) Lentiviral Particles: sc-35667-V.

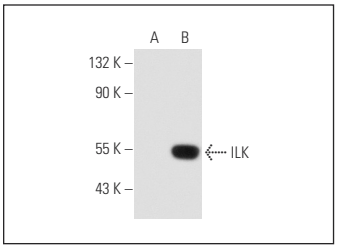
Molecular Weight of ILK: 59 kDa.

Positive Controls: ILK (h): 293T Lysate: sc-158634.

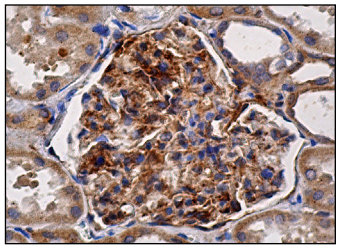
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



ILK (65.1): sc-20019. Western blot analysis of ILK expression in non-transfected: sc-117752 (**A**) and human ILK transfected: sc-158634 (**B**) 293T whole cell lysates.



ILK (65.1): sc-20019. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in glomeruli and tubules.

SELECT PRODUCT CITATIONS

1. Sawai, H., et al. 2006. Integrin-linked kinase activity is associated with interleukin-1 α-induced progressive behavior of pancreatic cancer and poor patient survival. Oncogene 25: 3237-3246.
2. Wang, S. and Basson, M.D. 2009. Integrin-linked kinase: a multi-functional regulator modulating extracellular pressure-stimulated cancer cell adhesion through focal adhesion kinase and AKT. Cell. Oncol. 31: 273-289.
3. Yan, Q., et al. 2010. Expression and role of integrin-linked kinase and collagen IV in human renal allografts with interstitial fibrosis and tubular atrophy. Transpl. Immunol. 23: 1-5.
4. Youn, S.W., et al. 2011. COMP-Ang1 stimulates HIF-1α-mediated SDF-1 overexpression and recovers ischemic injury through BM-derived progenitor cell recruitment. Blood 117: 4376-4386.
5. Zhu, X.Y., et al. 2012. Silencing of the integrin-linked kinase gene suppresses the proliferation, migration and invasion of pancreatic cancer cells (Panc-1). Genet. Mol. Biol. 35: 538-544.
6. Le Guellec, S., et al. 2013. The β5/focal adhesion kinase/glycogen synthase kinase 3β Integrin pathway in high-grade osteosarcoma: a protein expression profile predictive of response to neoadjuvant chemotherapy. Hum. Pathol. 44: 2149-2158.
7. Yu, L., et al. 2014. Selective regulation of p38β protein and signaling by integrin-linked kinase mediates bladder cancer cell migration. Oncogene 33: 690-701.
8. Lu, W.S., et al. 2015. Effects of Astragaloside IV on diabetic nephropathy in rats. Genet. Mol. Res. 14: 5427-5234.
9. Rozo, M., et al. 2016. Targeting β1-Integrin signaling enhances regeneration in aged and dystrophic muscle in mice. Nat. Med. 22: 889-896.

RESEARCH USE

For research use only, not for use in diagnostic procedures.