

# ILK (E-2): sc-137221

## BACKGROUND

Integrins are heterodimers composed of non-covalently associated transmembrane  $\alpha$  and  $\beta$  subunits. The 16  $\alpha$  and 8  $\beta$  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  $\beta 1$  and  $\beta 3$  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

ILK (E-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 416-452 at the C-terminus of ILK-1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>3</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-137221 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## RESEARCH USE

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

## APPLICATIONS

ILK (E-2) is recommended for detection of ILK-1 and ILK-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ILK (E-2) is also recommended for detection of ILK-1 and ILK-2 in additional species, including equine, canine, bovine, porcine and avian.

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.

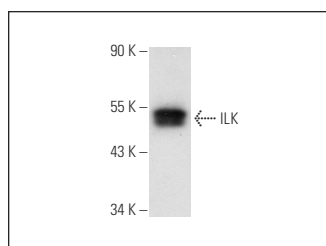
Molecular Weight of ILK: 59 kDa.

Positive Controls: rat heart extract: sc-2393, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



ILK (E-2): sc-137221. Western blot analysis of ILK expression in HeLa whole cell lysate.

## SELECT PRODUCT CITATIONS

- Leyme, A., et al. 2012. Identification of ILK as a new partner of the ADAM12 disintegrin and metalloprotease in cell adhesion and survival. *Mol. Biol. Cell* 23: 3461-3472.
- Mateo, F., et al. 2014. SPARC mediates metastatic cooperation between CSC and non-CSC prostate cancer cell subpopulations. *Mol. Cancer* 13: 237.
- Wu, M.H., et al. 2014. Endothelin-1 promotes vascular endothelial growth factor-dependent angiogenesis in human chondrosarcoma cells. *Oncogene* 33: 1725-1735.
- Yuan, M., et al. 2020. UNC5C-knockdown enhances the growth and metastasis of breast cancer cells by potentiating the integrin  $\alpha 6/\beta 4$  signaling pathway. *Int. J. Oncol.* 56: 139-150.
- Sarı Kılıçaslan, S.M., et al. 2021. Effects of integrin-linked kinase on protein kinase b, glycogen synthase kinase-3 $\beta$ , and  $\beta$ -catenin molecules in ovarian cancer cells. *Iran. J. Basic Med. Sci.* 24: 1500-1508.

## STORAGE

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

## CONJUGATES

See **ILK (65.1): sc-20019** for ILK antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.