SANTA CRUZ BIOTECHNOLOGY, INC.

p-ILK (Thr 173): sc-130196

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 counter receptors 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. Human ILK may be phosphorylated on several amino acid residues, including Thr 173.

REFERENCES

1. Hynes, R.O. 1992. Integrins: versatility, modulation, and signaling in cell adhesion. Cell 69: 11-25.
2. Clark, E.A. and Brugge, J.S. 1995. Integrins and signal transduction pathways: the road taken. Science 268: 233-239.
3. Sheppard, D. 1996. Epithelial integrins. Bioessays 18: 655-660.
4. Juliano, R. 1996. Cooperation between soluble factors and integrin-mediated cell anchorage in the control of cell growth and differentiation. Bioessays 18: 911-917.
5. Hannigan, G.E., et al. 1996. Regulation of cell adhesion and anchorage-dependent growth by a new Integrin β1-linked protein kinase. Nature 379: 91-96.
6. Radeva, G., et al. 1997. Overexpression of the integrin-linked kinase promotes anchorage-independent cell cycle progression. J. Biol. Chem. 272: 13937-13944.
7. Wu, C., et al. 1998. Integrin-linked protein kinase regulates Fibronectin matrix assembly, E-cadherin expression, and tumorigenicity. J. Biol. Chem. 273: 528-536.
8. Liu, X.C., et al. 2007. Role of ERK1/2 and PI 3-K in the regulation of CTGF-induced ILK expression in HK-2 cells. Clin. Chim. Acta 382: 89-94.
9. Monferran, S., et al. 2008. αVβ3 and αVβ5 integrins control Glioma cell response to ionising radiation through ILK and Rho B. Int. J. Cancer 123: 357-364.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

CHROMOSOMAL LOCATION

Genetic locus: ILK (human) mapping to 11p15.4.

SOURCE

p-ILK (Thr 173) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Thr 173 of ILK of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

p-ILK (Thr 173) is recommended for detection of Thr 173 phosphorylated ILK of 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)] 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 shRNA Plasmid (h): sc-35666-SH and ILK shRNA (h) Lentiviral Particles: sc-35666-V.

Molecular Weight of p-ILK: 59 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

SELECT PRODUCT CITATIONS

1. Mateo, F., et al. 2014. SPARC mediates metastatic cooperation between CSC and non-CSC prostate cancer cell subpopulations. Mol. Cancer 13: 237.

RESEARCH USE

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