

ILK (h4): 293T Lysate: sc-158634

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, and 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 Fibronectin matrix assembly in epithelial cells, indicating a potential role for ILK in cell growth, cell survival and tumorigenesis.

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 $\beta 1$ -integrin-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 PI3-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. $\alpha v \beta 3$ and $\alpha v \beta 5$ integrins control glioma cell response to ionising radiation through ILK and RhoB. *Int. J. Cancer* 123: 357-364.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

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

PRODUCT

ILK (h4): 293T Lysate represents a lysate of human ILK transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

ILK (h4): 293T Lysate is suitable as a Western Blotting positive control for human reactive ILK antibodies. Recommended use: 10-20 μ l per lane.

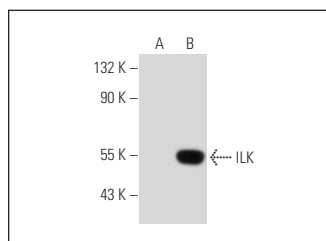
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

ILK (65.1): sc-20019 is recommended as a positive control antibody for Western Blot analysis of enhanced human ILK expression in ILK transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

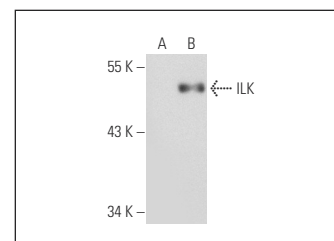
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

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

RESEARCH USE

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