

# ILKAP (41): sc-136341

## BACKGROUND

ILKAP (integrin-linked kinase-associated serine/threonine phosphatase 2C), also known as PP2C $\delta$ , is a 392 amino acid cytoplasmic protein phosphatase that selectively interacts with integrin linked kinase (ILK) to regulate growth factor signaling and cell adhesion. While widely expressed, ILKAP is found at highest levels in striated muscle with lower levels found in smooth muscle. ILKAP belongs to the PP2C family and contains one PP2C-like domain. ILKAP has been suggested to inhibit oncogenic transformation and the ILK-GSK3 $\beta$  signaling axis, and can bind two magnesium or manganese ions per subunit as cofactors. The gene encoding ILKAP maps to human chromosome 2, which consists of 237 million bases encoding over 1,400 genes and making up approximately 8% of the human genome.

## REFERENCES

1. Tong, Y., et al. 1998. Cloning and characterization of a novel mammalian PP2C isozyme. *J. Biol. Chem.* 273: 35282-35290.
2. Leung-Hagesteijn, C., et al. 2001. Modulation of integrin signal transduction by ILKAP, a protein phosphatase 2C associating with the integrin-linked kinase, ILK1. *EMBO J.* 20: 2160-2170.
3. Kumar, A.S., et al. 2004. ILKAP regulates ILK signaling and inhibits anchorage-independent growth. *Oncogene* 23: 3454-3461.
4. Tamura, S., et al. 2006. PP2C family members play key roles in regulation of cell survival and apoptosis. *Cancer Sci.* 97: 563-567.
5. Lammers, T. and Lavi, S. 2007. Role of type 2C protein phosphatases in growth regulation and in cellular stress signaling. *Crit. Rev. Biochem. Mol. Biol.* 42: 437-461.
6. Nakrieko, K.A., et al. 2008. Modulation of integrin-linked kinase nucleocytoplasmic shuttling by ILKAP and CRM1. *Cell Cycle* 7: 2157-2166.
7. Pridgeon, J.W., et al. 2009. Proteomic analysis reveals Hrs ubiquitin-interacting motif-mediated ubiquitin signaling in multiple cellular processes. *FEBS J.* 276: 118-131.

## CHROMOSOMAL LOCATION

Genetic locus: ILKAP (human) mapping to 2q37.3; Ilkap (mouse) mapping to 1 D.

## SOURCE

ILKAP (41) is a mouse monoclonal antibody raised against amino acids 38-144 of ILKAP of rat origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $\gamma_1$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ILKAP (41) is available conjugated to agarose (sc-136341 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; and to HRP (sc-136341 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA.

## APPLICATIONS

ILKAP (41) is recommended for detection of ILKAP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for ILKAP siRNA (h): sc-94868, ILKAP siRNA (m): sc-146223, ILKAP shRNA Plasmid (h): sc-94868-SH, ILKAP shRNA Plasmid (m): sc-146223-SH, ILKAP shRNA (h) Lentiviral Particles: sc-94868-V and ILKAP shRNA (m) Lentiviral Particles: sc-146223-V.

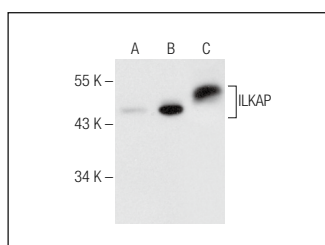
Molecular Weight of ILKAP: 47 kDa.

Positive Controls: ILKAP (m2): 293T Lysate: sc-121054, rat testis extract: sc-2400 or rat skeletal muscle extract: sc-364810.

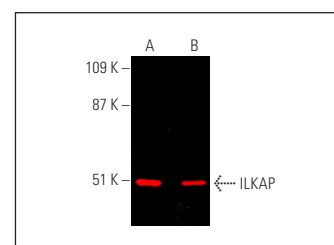
## RECOMMENDED SUPPORT REAGENTS

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



ILKAP (41): sc-136341. Western blot analysis of ILKAP expression in non-transfected: sc-117752 (A) and mouse ILKAP transfected: sc-121054 (B) 293T whole cell lysates and rat skeletal muscle tissue extract (C).



ILKAP (41): sc-136341. Near-infrared western blot analysis of ILKAP expression in rat testis tissue extract (A) and L8 whole cell lysate (B). Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG $\kappa$  BP-CFL 790: sc-516181.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.