

# PICK1 (C-4): sc-74592

## BACKGROUND

Protein interacting with C kinase 1 (PICK1) is a PDZ-domain containing protein that is located in the perinuclear region and is phosphorylated in response to PKC  $\alpha$  activation. PKC  $\alpha$ , which is essential for the regulation of proliferation and differentiation in numerous cell types, contains within its catalytic region a PDZ-binding domain that is absent from other PKC isoforms. Mutation of the PICK1 PDZ domain inhibits the binding of PICK1 to PKC  $\alpha$ . PICK1 also interacts with the carboxy-terminus of  $\alpha$ -amino-3-hydroxy-5-methyl-isoxazole-4-propionic acid (AMPA) receptor, a neurotransmitter receptor located at excitatory synapses, suggesting that PICK1 plays a role in the modulation of synaptic transmission by targeting and anchoring AMPA to specific synapses.

## REFERENCES

1. Staudinger, J., et al. 1995. PICK1: a perinuclear binding protein and substrate for protein kinase C isolated by the yeast two-hybrid system. *J. Cell Biol.* 128: 263-271.
2. Staudinger, J., et al. 1997. Specific interaction of the PDZ domain protein PICK1 with the COOH terminus of protein kinase C- $\alpha$ . *J. Biol. Chem.* 272: 32019-32024.
3. Xia, J., et al. 1999. Clustering of AMPA receptors by the synaptic PDZ domain-containing protein PICK1. *Neuron* 22: 179-187.
4. Wyszynski, M., et al. 1999. Association of AMPA receptors with a subset of glutamate receptor-interacting protein *in vivo*. *J. Neurosci.* 19: 6528-6537.
5. Dev, K.K., et al. 1999. The protein kinase C  $\alpha$  binding protein PICK1 interacts with short but not long form alternative splice variants of AMPA receptor subunits. *Neuropharmacology* 38: 635-644.
6. Matsuzawa, D., et al. 2007. Identification of functional polymorphisms in the promoter region of the human PICK1 gene and their association with methamphetamine psychosis. *Am. J. Psychiatry* 164:1105-1114.
7. Pan, L., et al. 2007. Clustering and synaptic targeting of PICK1 requires direct interaction between the PDZ domain and lipid membranes. *EMBO J.* 26: 4576-4587.

## CHROMOSOMAL LOCATION

Genetic locus: PICK1 (human) mapping to 22q13.1; Pick1 (mouse) mapping to 15 E1.

## SOURCE

PICK1 (C-4) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of PICK1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

PICK1 (C-4) is recommended for detection of PICK1 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), 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).

PICK1 (C-4) is also recommended for detection of PICK1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PICK1 siRNA (h): sc-36221, PICK1 siRNA (m): sc-36222, PICK1 shRNA Plasmid (h): sc-36221-SH, PICK1 shRNA Plasmid (m): sc-36222-SH, PICK1 shRNA (h) Lentiviral Particles: sc-36221-V and PICK1 shRNA (m) Lentiviral Particles: sc-36222-V.

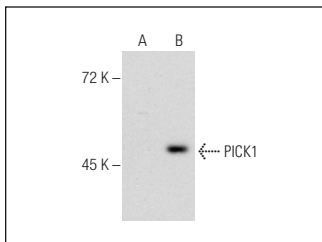
Molecular Weight of PICK1: 50 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410, PICK1 (m): 293T Lysate: sc-122567 or mouse brain extract: sc-2253.

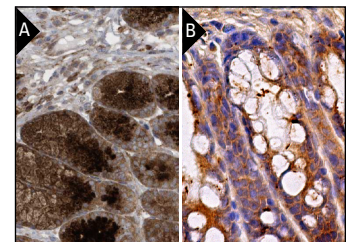
## RECOMMENDED SUPPORT REAGENTS

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, 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). 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



PICK1 (C-4): sc-74592. Western blot analysis of PICK1 expression in non-transfected: sc-117752 (A) and mouse PICK1 transfected: sc-122567 (B) 293T whole cell lysates.



PICK1 (C-4): sc-74592. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human stomach tissue showing cytoplasmic staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic staining of glandular cells (B).

## 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.