

PICK1 (F-10): sc-166654

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 α activation. PKC α , 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 α . PICK1 also interacts with the carboxy-terminus of α -amino-3-hydroxy-5-methyl-isoxazole-4-proprionic 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., Zhou, J., Burgess, R., Elledge, S.J. and Olson, E.N. 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., Lu, J. and Olson, E.N. 1997. Specific interaction of the PDZ domain protein PICK1 with the COOH-terminus of protein kinase C- α . *J. Biol. Chem.* 272: 32019-32024.
3. Xia, J., Zhang, X., Staudinger, J. and Huganir, R.L. 1999. Clustering of AMPA receptors by the synaptic PDZ domain-containing protein PICK1. *Neuron* 22: 179-187.
4. Wyszynski, M., Valtschanoff, J.G., Naisbitt, S., Dunah, A.W., Kim, E., Standaert, D.G., Weinberg, R. and Sheng, M. 1999. Association of AMPA receptors with a subset of glutamate receptor-interacting protein *in vivo*. *J. Neurosci.* 19: 6528-6537.
5. Dev, K.K., Nishimune, A., Henley, J.M. and Nakanishi, S. 1999. The protein kinase C α binding protein PICK1 interacts with short but not long form alternative splice variants of AMPA receptor subunits. *Neuropharmacology* 38: 635-644.

CHROMOSOMAL LOCATION

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

SOURCE

PICK1 (F-10) 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 μ g IgG₁ 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.

RESEARCH USE

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

APPLICATIONS

PICK1 (F-10) 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 μ g per 100-500 μ 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).

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.

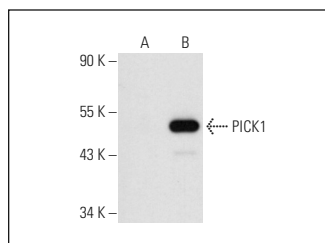
Molecular Weight of PICK1: 50 kDa.

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

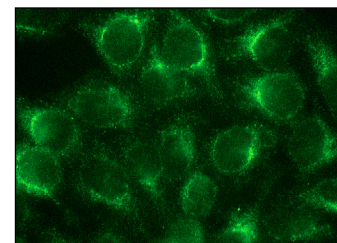
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 (F-10): sc-166654. Western blot analysis of PICK1 expression in non-transfected: sc-117752 (A) and mouse PICK1 transfected: sc-122567 (B) 293T whole cell lysates.



PICK1 (F-10): sc-166654. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Huo, Y., Lu, W., Tian, Y., Hou, Q. and Man, H.Y. 2022. Prkn knockout mice show autistic-like behaviors and aberrant synapse formation. *iScience* 25: 104573.

PROTOCOLS

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