SANTA CRUZ BIOTECHNOLOGY, INC.

PICK1 (H-300): sc-11410

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 PKCα activation. PKCα, 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 PKCα. PICK1 also interacts with the carboxy-terminus of α-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 Cα. J. Biol. Chem. 272: 32019-32024.

CHROMOSOMAL LOCATION

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

SOURCE

PICK1 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of PICK1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PICK1 (H-300) is recommended for detection of PICK1 of mouse, rat and 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)], 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).

PICK1 (H-300) is also recommended for detection of PICK1 in additional species, including equine, canine, bovine, porcine and avian.

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.

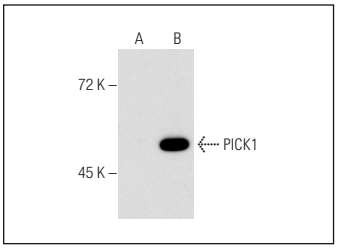
Molecular Weight of PICK1: 50 kDa.

Positive Controls: PICK1 (m): 293T Lysate: sc-122567, SH-SY5Y cell lysate: sc-3812 or mouse brain extract: sc-2253.

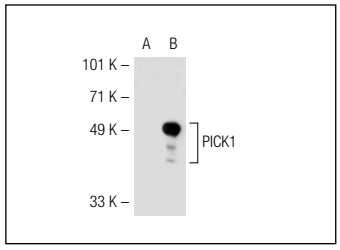
STORAGE

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

DATA



PICK1 (H-300): sc-11410. Western blot analysis of PICK1 expression in non-transfected: sc-117752 (**A**) and mouse PICK1 transfected: sc-122567 (**B**) 293T whole cell lysates.



PICK1 (H-300): sc-11410. Western blot analysis of PICK1 expression in non-transfected (**A**) and human PICK1 transfected (**B**) 293 whole cell lysates.

SELECT PRODUCT CITATIONS

1. Duggan, A., et al. 2002. The PDZ domain protein PICK1 and the sodium channel BNaC1 interact and localize at mechanosensory terminals of dorsal root ganglion neurons and dendrites of central neurons. J. Biol. Chem. 277: 5203-5208.
2. Vandenberghe, W., et al. 2005. Stargazin is an AMPA receptor auxiliary subunit. Proc. Natl. Acad. Sci. USA 102: 485-490.
3. Hanley, J.G., et al. 2005. PICK1 is a calcium-sensor for NMDA-induced AMPA receptor trafficking. EMBO J. 24: 3266-3278.
4. Jo, J., et al. 2008. Metabotropic glutamate receptor-mediated LTD involves two interacting Ca^{2+} sensors, NCS-1 and PICK1. Neuron 60: 1095-1111.
5. Höhne, M., et al. 2011. The BAR domain protein PICK1 regulates cell recognition and morphogenesis by interacting with Neph proteins. Mol. Cell. Biol. 31: 3241-3251.

RESEARCH USE

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

PROTOCOLS

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