SANTA CRUZ BIOTECHNOLOGY, INC.

DPPX (H-4): sc-398726

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Dipeptidyl peptidases (DPPs) mediate regulatory activity of their substrates and have been linked to a variety of diseases including type 2 diabetes, obesity and cancer. DPPs have post-proline dipeptidyl aminopeptidase activity, cleaving Xaa-Pro dipeptides from the N-termini of proteins. DPPs can bind specific voltage-gated potassium channels and alter their expression and biophysical properties and may also influence T cells. DPP proteins include DPRP1 (dipeptidyl-peptidase 8, DPP8, MSTP141), DPRP2 (dipeptidyl-peptidase 9, DPP9), DPP3 (DPPIII), DPRP3 (dipeptidyl-peptidase 10, DPP10, DPL2, DPPY, DPRP3), DPP6 (DPPX), DPP4 (adenosine deaminase complexing protein-2, T cell activation antigen CD26) and DPP7 (DPP2, QPP). DPPX, which can bind to the potassium channel KCND2, is a single-pass type II membrane protein. It is expressed mainly in brain tissues and may act as a modulator for cell surface expressed and activity of KCND2.

REFERENCES

1. Yokotani, N., et al. 1993. Non-conservation of a catalytic residue protein encoded by a gene on human chromosome 7. Hum. Mol. Genet. 2: 1037-1039.
2. Strop, P., et al. 2004. Structure of a human A-type potassium channel interacting protein DPPX, a member of the dipeptidyl aminopeptidase family. J. Mol. Biol. 343: 1055-1065.
3. Jerng, H.H., et al. 2004. Modulation of Kv4.2 channel expression and gatin (DPP10). Biophys. J. 87: 2380-2396.
4. Jerng, H.H., et al. 2004. Molecular physiology and modulation of somatodendritic A-type potassium channels. Mol. Cell. Neurosci. 27: 343-369.
5. Zagha, E., et al. 2005. DPP10 modulates Kv4-mediated A-type potassium channels. J. Biol. Chem. 280: 18853-18861.

CHROMOSOMAL LOCATION

Genetic locus: DPP6 (human) mapping to 7q36.2; Dpp6 (mouse) mapping to 5 B1.

SOURCE

DPPX (H-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 173-220 within an internal region of DPPX of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-398726 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

DPPX (H-4) is recommended for detection of DPPX of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for DPPX siRNA (h): sc-60548, DPPX siRNA (m): sc-60549, DPPX shRNA Plasmid (h): sc-60548-SH, DPPX shRNA Plasmid (m): sc-60549-SH, DPPX shRNA (h) Lentiviral Particles: sc-60548-V and DPPX shRNA (m) Lentiviral Particles: sc-60549-V.

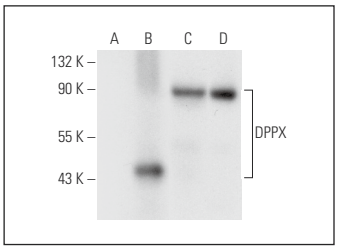
Molecular Weight of DPPX: 100 kDa.

Positive Controls: DPPX (h): 293T Lysate: sc-115718, SK-N-SH cell lysate: sc-2410 or IMR-32 cell lysate: sc-2409.

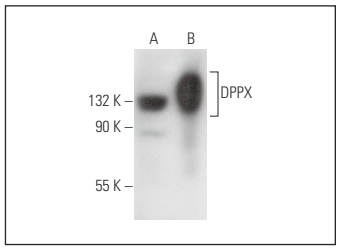
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



DPPX (H-4): sc-398726. Western blot analysis of DPPX expression in non-transfected 293T: sc-117752 (**A**), human DPPX transfected 293T: sc-115718 (**B**) and SK-N-SH (**C**) whole cell lysates and human brain tissue extract (**D**).



DPPX (H-4): sc-398726. Western blot analysis of DPPX expression in IMR-32 (**A**) and BE (2)-M17 (**B**) whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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