

DPPX (A-8): sc-365147

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 DPP1 (dipeptidyl-peptidase 8, DPP8, MSTP141), DPP2 (dipeptidyl-peptidase 9, DPP9), DPP3 (DPPIII), DPP3 (dipeptidyl-peptidase 10, DPP10, DPL2, DPPY, DPP3), 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. Jerng, H.H., et al. 2004. Molecular physiology and modulation of somatodendritic A-type potassium channels. *Mol. Cell. Neurosci.* 27: 343-369.
3. Jerng, H.H., et al. 2004. Modulation of Kv4.2 channel expression and gatin (DPP10). *Biophys. J.* 87: 2380-2396.
4. Strop, P., et al. 2004. Structure of a human of the dipeptidyl aminopeptidase family. *J. Mol. Biol.* 343: 1055-1065.

CHROMOSOMAL LOCATION

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

SOURCE

DPPX (A-8) is a mouse monoclonal antibody raised against amino acids 668-744 mapping within an extracellular domain of DPPX of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DPPX (A-8) is available conjugated to agarose (sc-365147 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365147 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365147 PE), fluorescein (sc-365147 FITC), Alexa Fluor® 488 (sc-365147 AF488), Alexa Fluor® 546 (sc-365147 AF546), Alexa Fluor® 594 (sc-365147 AF594) or Alexa Fluor® 647 (sc-365147 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365147 AF680) or Alexa Fluor® 790 (sc-365147 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

DPPX (A-8) is recommended for detection of DPPX 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).

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.

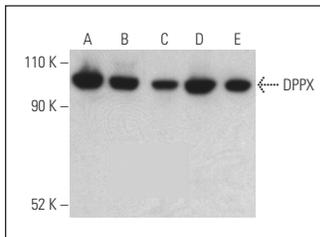
Molecular Weight of DPPX: 100 kDa.

Positive Controls: Neuro-2A whole cell lysate: sc-364185, IMR-32 cell lysate: sc-2409 or DU 145 cell lysate: sc-2268.

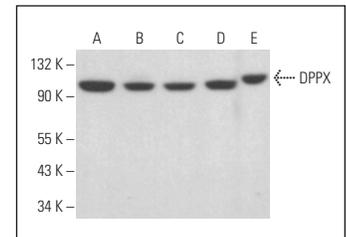
RECOMMENDED SUPPORT REAGENTS

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 (A-8): sc-365147. Western blot analysis of DPPX expression in DU 145 (A), IMR-32 (B), Neuro-2A (C), F9 (D) and AT3B-1 (E) whole cell lysates. Detection reagent used: m-IgG_{2a} BP-HRP: sc-542731.



DPPX (A-8): sc-365147. Western blot analysis of DPPX expression in DU 145 (A), PC-3 (B), IMR-32 (C), F9 (D) and AT3B-1 (E) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Li, M., et al. 2020. Identification and validation of novel DNA methylation markers for early diagnosis of lung adenocarcinoma. *Mol. Oncol.* 14: 2744-2758.

RESEARCH USE

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

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