

DPP10 (C-1): sc-393442

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, DPP2, DPP3, DPP7, DPP10, DPPX and CD26. DPP10 (dipeptidyl-peptidase 10), also known as DPP3 (dipeptidyl peptidase IV-related protein 3), DPL2 or DPPY, is a non-functional dipeptidyl peptidase which can bind to the potassium channels KV4.1 and KV4.2. It is a single-pass type II membrane protein expressed in spinal cord, adrenal glands, pancreas and brain tissues and may act as a modulator for cell surface expression and activity of KV4.1 and KV4.2.

REFERENCES

1. Qi, S.Y., et al. 2003. Cloning and characterization of dipeptidyl peptidase 10, a new member of an emerging subgroup of serine proteases. *Biochem. J.* 373: 179-189.
2. Jerng, H.H., et al. 2004. Modulation of Kv4.2 channel expression and gating by dipeptidyl peptidase 10 (DPP10). *Biophys. J.* 87: 2380-2396.
3. Jerng, H.H., et al. 2005. Multiprotein assembly of Kv4.KChIP3 and DPP10 produces ternary channel complexes with ISA-like properties. *J. Physiol.* 568: 767-788.

CHROMOSOMAL LOCATION

Genetic locus: DPP10 (human) mapping to 2q14.1; Dpp10 (mouse) mapping to 1 E2.3.

SOURCE

DPP10 (C-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 156-187 within an internal region of DPP10 of mouse 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.

DPP10 (C-1) is available conjugated to agarose (sc-393442 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393442 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393442 PE), fluorescein (sc-393442 FITC), Alexa Fluor® 488 (sc-393442 AF488), Alexa Fluor® 546 (sc-393442 AF546), Alexa Fluor® 594 (sc-393442 AF594) or Alexa Fluor® 647 (sc-393442 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393442 AF680) or Alexa Fluor® 790 (sc-393442 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393442 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

DPP10 (C-1) is recommended for detection of DPP10 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 DPP10 siRNA (h): sc-62228, DPP10 siRNA (m): sc-62229, DPP10 shRNA Plasmid (h): sc-62228-SH, DPP10 shRNA Plasmid (m): sc-62229-SH, DPP10 shRNA (h) Lentiviral Particles: sc-62228-V and DPP10 shRNA (m) Lentiviral Particles: sc-62229-V.

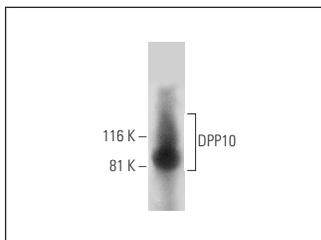
Molecular Weight of DPP10: 97 kDa.

Positive Controls: Y79 cell lysate: sc-2240.

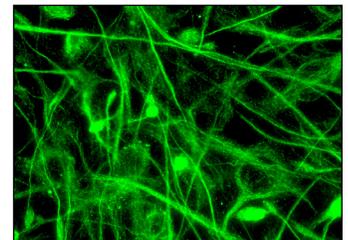
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BPHRP: sc-516102 or m-IgGκ BPHRP (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 BPFITC: sc-516140 or m-IgGκ BPE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



DPP10 (C-1): sc-393442. Western blot analysis of DPP10 expression in Y79 whole cell lysate.



DPP10 (C-1): sc-393442. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing membrane localization.

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.

PROTOCOLS

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