

DPP7 (C-5): sc-514834

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, DPRP2, DPP3, DPP7, DPP10, DPPX and CD26. DPP7 (dipeptidyl-peptidase 7), also known as DPP2, DPP11 or QPP (quiescent cell proline dipeptidase), is expressed in quiescent lymphocytes and localizes to lysosomes. In response to calcium release, DPP7 can be secreted in its active form. DPP7 exists as a homodimer via its leucine zipper motif and is involved in the degradation of oligopeptides. DPP7 is essential for lymphocyte survival, as the inhibition of DPP7 results in quiescent cell apoptosis.

REFERENCES

1. Chiravuri, M., et al. 2000. Vesicular localization and characterization of a novel post-proline-cleaving aminodipeptidase, quiescent cell proline dipeptidase. *J. Immunol.* 165: 5695-5702.
2. Rosenblum, J.S. and Kozarich, J.W. 2003. Prolyl peptidases: a serine protease subfamily with high potential for drug discovery. *Curr. Opin. Chem. Biol.* 7: 496-504.
3. Hu, Y., et al. 2005. Synthesis and structure-activity relationship of N-alkyl Gly-boro-Pro inhibitors of DPP4, FAP, and DPP7. *Bioorg. Med. Chem. Lett.* 15: 4239-4242.
4. Shreder, K.R., et al. 2005. Boro-norleucine as a P1 residue for the design of selective and potent DPP7 inhibitors. *Bioorg. Med. Chem. Lett.* 15: 4256-4260.

CHROMOSOMAL LOCATION

Genetic locus: Dpp7 (mouse) mapping to 2 A3.

SOURCE

DPP7 (C-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 382-401 within an internal region of DPP7 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DPP7 (C-5) is available conjugated to agarose (sc-514834 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514834 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514834 PE), fluorescein (sc-514834 FITC), Alexa Fluor® 488 (sc-514834 AF488), Alexa Fluor® 546 (sc-514834 AF546), Alexa Fluor® 594 (sc-514834 AF594) or Alexa Fluor® 647 (sc-514834 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514834 AF680) or Alexa Fluor® 790 (sc-514834 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

DPP7 (C-5) is recommended for detection of DPP7 of mouse and rat 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 DPP7 siRNA (m): sc-62233, DPP7 shRNA Plasmid (m): sc-62233-SH and DPP7 shRNA (m) Lentiviral Particles: sc-62233-V.

Molecular Weight (predicted) of DPP7: 54 kDa.

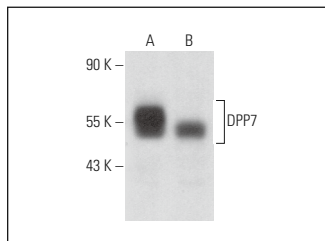
Molecular Weight (observed) of DPP7: 50 kDa.

Positive Controls: PC-12 cell lysate: sc-2250 or KNRK whole cell lysate: sc-2214.

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



DPP7 (C-5): sc-514834. Western blot analysis of DPP7 expression in PC-12 (A) and KNRK (B) whole cell lysates.

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.