

DPRP1 (A-5): sc-376399

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. DPRP1 (dipeptidyl-peptidase IV-related protein 1), also known as DPP8 (dipeptidyl-peptidase 8), DP8 or MSTP141, is a member of the peptidase S9B family of proteins that exhibit prolyl oligopeptidase activity. DPRP1 localizes to the cytoplasm and is ubiquitously expressed with predominant expression in placenta, brain, prostate, testis and muscle. DPRP1 is similar to CD26 (dipeptidyl peptidase IV) suggesting that it may be involved in immune function and participate in the activation of T-cells.

REFERENCES

- Abbott, C.A., et al. 2000. Cloning, expression and chromosomal localization of a novel human dipeptidyl peptidase (DPP) IV homolog, DPP8. *Eur. J. Biochem.* 267: 6140-6150.
- Olsen, C., et al. 2002. Identification and characterization of human DPP9, a novel homologue of dipeptidyl peptidase IV. *Gene* 299: 185-193.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606819. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- 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.
- Busek, P., et al. 2007. Dipeptidyl peptidase-IV enzymatic activity bearing molecules in human brain tumors—good or evil? *Front. Biosci.* 13: 2319-2326.
- Van der Veken, P., et al. 2007. Irreversible inhibition of dipeptidyl peptidase 8 by dipeptide-derived diaryl phosphonates. *J. Med. Chem.* 50: 5568-5570.

CHROMOSOMAL LOCATION

Genetic locus: DPP8 (human) mapping to 15q22.31; Dpp8 (mouse) mapping to 9 C.

SOURCE

DPRP1 (A-5) is a mouse monoclonal antibody raised against amino acids 11-80 mapping near the N-terminus of DPRP1 of human origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

DPRP1 (A-5) is recommended for detection of DPRP1 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 DPRP1 siRNA (h): sc-62234, DPRP1 siRNA (m): sc-62235, DPRP1 shRNA Plasmid (h): sc-62234-SH, DPRP1 shRNA Plasmid (m): sc-62235-SH, DPRP1 shRNA (h) Lentiviral Particles: sc-62234-V and DPRP1 shRNA (m) Lentiviral Particles: sc-62235-V.

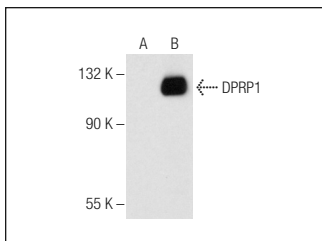
Molecular Weight of DPRP1: 100 kDa.

Positive Controls: DPRP1 (h2): 293T Lysate: sc-171936.

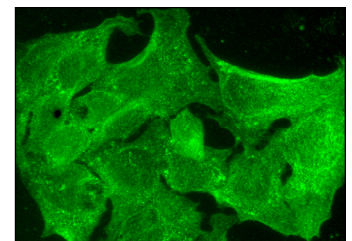
RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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



DPRP1 (A-5): sc-376399. Western blot analysis of DPRP1 expression in non-transfected: sc-117752 (A) and human DPRP1 transfected: sc-171936 (B) 293T whole cell lysates.



DPRP1 (A-5): sc-376399. Immunofluorescence staining of formalin-fixed Hep G2 cells showing membrane localization.

SELECT PRODUCT CITATIONS

- Justa-Schuch, D., et al. 2016. DPP9 is a novel component of the N-end rule pathway targeting the tyrosine kinase Syk. *Elife* 5: e16370.
- Koyani, C.N., et al. 2018. Saxagliptin but not Sitagliptin inhibits CaMKII and PKC via DPP9 inhibition in cardiomyocytes. *Front. Physiol.* 9: 1622.

RESEARCH USE

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