SANTA CRUZ BIOTECHNOLOGY, INC.

DPP10 (V-17): sc-55636

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. DPP10 (dipeptidyl-peptidase 10), also known as DPRP3 (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

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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.
4. Zagha, E., et al. 2005. DPP10 modulates KV4-mediated A-type potassium channels. J. Biol. Chem. 280: 18853-18861.
5. Takimoto, K., et al. 2006. Species and tissue differences in the expression of DPPY splicing variants. Biochem. Biophys. Res. Commun. 348: 1094-1100.
6. Chen, T., et al. 2006. Molecular characterization of a novel dipeptidyl peptidase like 2-short form (DPL2-s) that is highly expressed in the brain and lacks dipeptidyl peptidase activity. Biochim. Biophys. Acta 1764: 33-43.
7. Li, H.L., et al. 2006. DPP10 is an inactivation modulatory protein of KV4.3 and Kv1.4. Am. J. Physiol., Cell Physiol. 291: C966-C976.

CHROMOSOMAL LOCATION

Genetic locus: Dpp10 (rat) mapping to 13q11.

SOURCE

DPP10 (V-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DPP10 of rat origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-55636 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DPP10 (V-17) is recommended for detection of DPP10 of rat 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).

Molecular Weight of DPP10: 97 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.