

DPP10 (h): 293T Lysate: sc-174156

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 Kv4.2, 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.
8. Jerng, H.H., et al. 2007. DPP10 splice variants are localized in distinct neuronal populations and act to differentially regulate the inactivation properties of Kv4-based ion channels. *Mol. Cell. Neurosci.* 35: 604-624.

CHROMOSOMAL LOCATION

Genetic locus: DPP10 (human) mapping to 2q14.1.

PRODUCT

DPP10 (h): 293T Lysate represents a lysate of human DPP10 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

DPP10 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive DPP10 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

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.