SANTA CRUZ BIOTECHNOLOGY, INC.

DPP3 (Q-17): sc-55640

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. DPP3 (dipeptidyl-peptidase 3), also known as DPPIII, is a zinc-exopeptidase that belongs to the peptidase M49 family. DPP3 localizes to the cytoplasm and is involved in intracellular protein catabolism. More specifically, DPP3 is an important enzyme involved in the degradation of enkephalins. An increase in the activity of DPP3 is implicated in ovarian and endometrial cancers.

REFERENCES

1. Shimamori, Y., et al. 1989. Human placental dipeptidyl aminopeptidase III: hydrolysis of enkephalins and its stimulation by cobaltous ion. Biochem. Med. Metab. Biol. 40: 305-310.
2. Hashimoto, J., et al. 2000. Identification of dipeptidyl peptidase III in human neutrophils. Biochem. Biophys. Res. Commun. 273: 393-397.
3. Yamamoto, Y., et al. 2000. Characterization of tynorphin, a potent endogenous inhibitor of dipeptidyl peptidaseIII. Peptides 21: 503-508.
4. Fukasawa, K.M., et al. 2000. Assignment of the dipeptidyl peptidase III gene (DPP3) to human chromosome 11 band q12→q13.1 by *in situ* hybridization. Cytogenet. Cell Genet. 88: 99-100.
5. Abramic, M., et al. 2001. Human and rat dipeptidyl peptidase III: biochemical and mass spectrometric arguments for similarities and differences. Biol. Chem. 381: 1233-1243.
6. Abramic, M., et al. 2003. Highly reactive cysteine residues are part of the substrate binding site of mammalian dipeptidyl peptidases III. Int. J. Biochem. Cell Biol. 36: 434-446.

CHROMOSOMAL LOCATION

Genetic locus: DPP3 (human) mapping to 11q13.2; Dpp3 (mouse) mapping to 19 A.

SOURCE

DPP3 (Q-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of DPP3 of human 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-55640 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

DPP3 (Q-17) is recommended for detection of DPP3 of mouse, rat and human 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).

DPP3 (Q-17) is also recommended for detection of DPP3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for DPP3 siRNA (h): sc-62230, DPP3 siRNA (m): sc-62231, DPP3 shRNA Plasmid (h): sc-62230-SH, DPP3 shRNA Plasmid (m): sc-62231-SH, DPP3 shRNA (h) Lentiviral Particles: sc-62230-V and DPP3 shRNA (m) Lentiviral Particles: sc-62231-V.

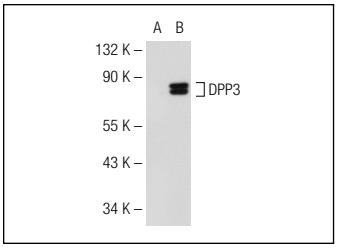
Molecular Weight of DPP3: 83 kDa.

Positive Controls: DPP3 (h): 293T Lysate: sc-173142.

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.

DATA



DPP3 (Q-17): sc-55640. Western blot analysis of DPP3 expression in non-transfected: sc-117752 (**A**) and human DPP3 transfected: sc-173142 (**B**) 293T whole cell lysates.

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.