SANTA CRUZ BIOTECHNOLOGY, INC.

CNDP2 (AT15E5): sc-517394

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CNDP2 is a cytosolic, non-specific dipeptidase that belongs to the peptidase M20A family of proteins. CNDP2 is a secreted peptidase homologous to M20 peptidases. CNDP2 is expressed by all adult and fetal tissue, however, an isoform lacking exons 3 and 4 was expressed in all fetal tissue, but only in adult liver. In human hepatocellular carcinoma (HCC) cells, this isoform (also referred to as CPGL-B, carboxypeptidase of glutamate like-B) is frequently underexpressed. This underexpression shows a significant correlation with HCC venous invasion and tumor microsatellite formations. Overexpression of CPGL-B in hepatocellular carcinoma cells leads to significant inhibition of HC cell viability, colony formation, cell invasiveness and tumor formation.

REFERENCES

1. Serville, F., Guillard, J.M., Junien, C. and Gauville, J. 1979. A child with a ring 18 chromosome: 46,XX,r(18) and a decreased enzymatic activity of erythrocyte peptidase A. Ann. Pediatr. 26: 711-715.
2. Parkin, B.H. 1981. The evidential value of peptidase A as a semen typing system. J. Forensic Sci. 26: 398-404.
3. Zhang, P., Chan, D.W., Zhu, Y., Li, J.J., Ng, I.O., Wan, D. and Gu, J. 2006. Identification of carboxypeptidase of glutamate like-B as a candidate suppressor in cell growth and metastasis in human hepatocellular carcinoma. Clin. Cancer Res. 12: 6617-6625.
4. Wanic, K., Placha, G., Dunn, J., Smiles, A., Warram, J.H. and Krolewski, A.S. 2008. Exclusion of polymorphisms in carnosinase genes (CNDP1 and CNDP2) as a cause of diabetic nephropathy in type 1 diabetes: results of large case-control and follow-up studies. Diabetes 57: 2547-2551.
5. Otani, H., Okumura, A., Nagai, K. and Okumura, N. 2008. Colocalization of a carnosine-splitting enzyme, tissue carnosinase (CN2)/cytosolic non-specific dipeptidase 2 (CNDP2), with histidine decarboxylase in the tuberomammillary nucleus of the hypothalamus. Neurosci. Lett. 445: 166-169.

CHROMOSOMAL LOCATION

Genetic locus: CNDP2 (human) mapping to 18q22.3; Cndp2 (mouse) mapping to 18 E4.

SOURCE

CNDP2 (AT15E5) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 1-475 of CNDP2 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 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

CNDP2 (AT15E5) is recommended for detection of CNDP2 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), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CNDP2 siRNA (h): sc-72935, CNDP2 siRNA (m): sc-72936, CNDP2 shRNA Plasmid (h): sc-72935-SH, CNDP2 shRNA Plasmid (m): sc-72936-SH, CNDP2 shRNA (h) Lentiviral Particles: sc-72935-V and CNDP2 shRNA (m) Lentiviral Particles: sc-72936-V.

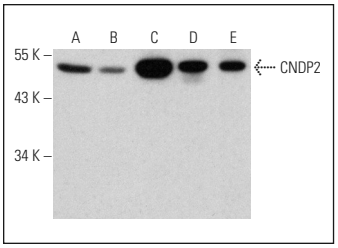
Molecular Weight of CNDP2: 53 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, human kidney extract: sc-363764 or human spleen extract: sc-363779.

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



CNDP2 (AT15E5): sc-517394. Western blot analysis of CNDP2 expression in Jurkat (**A**) and H69AR (**B**) whole cell lysates and human kidney (**C**), human spleen (**D**) and mouse kidney (**E**) tissue extracts.

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.