SANTA CRUZ BIOTECHNOLOGY, INC.

OC-2 (W-22): sc-133862

BACKGROUND

The predicted 485 amino acid ONECUT2 (OC-2) protein is a transcriptional activator that functions in activating the transcription of several liver genes, such as HNF3-β. OC-2 is a member of the CUT homeobox family and contains one CUT DNA-binding domain and one homeobox DNA-binding domain. OC-2 shares several regions of sequence homology with OC-1 (HNF6), including a serine/threonine- and proline-rich sequence (STP box). OC-2 localizes to the nucleus and abundant expression of OC-2 is observed in liver and skin tissues, whereas lower expression is demonstrated in testis, brain (occipital cortex) and urinary bladder tissues. The ability of OC-2 to recognize binding sites present in regulatory regions of liver-expressed genes differ from, but overlap with, those of OC-1. Like OC-1, recombinant OC-2 stimulates transcription of the HNF3-β gene. Research also suggests that OC-2 participates in liver differentiation and metabolism.

REFERENCES

1. Jacquemin, P., Lannoy, V.J., Rousseau, G.G. and Lemaigre, F.P. 1999. OC-2, a novel mammalian member of the ONECUT class of homeodomain transcription factors whose function in liver partially overlaps with that of hepatocyte nuclear factor-6. J. Biol. Chem. 274: 2665-2671.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604894. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Jacquemin, P., Pierreux, C.E., Fierens, S., van Eyll, J.M., Lemaigre, F.P. and Rousseau, G.G. 2003. Cloning and embryonic expression pattern of the mouse onecut transcription factor OC-2. Gene Expr. Patterns 3: 639-644.
5. Clotman, F., Jacquemin, P., Plumb-Rudewiez, N., Pierreux, C.E., Van der Smissen, P., Dietz, H.C., Courtoy, P.J., Rousseau, G.G. and Lemaigre, F.P. 2005. Control of liver cell fate decision by a gradient of TGFβ signaling modulated by onecut transcription factors. Genes Dev. 19: 1849-1854.
6. Clotman, F. and Lemaigre, F.P. 2006. Control of hepatic differentiation by activin/TGFβ signaling. Cell Cycle 5: 168-171.

CHROMOSOMAL LOCATION

Genetic locus: ONECUT2 (human) mapping to 18q21.31; Onecut2 (mouse) mapping to 18 E1.

SOURCE

OC-2 (W-22) is a Protein A purified rabbit polyclonal antibody raised against synthetic OC-2 peptide of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

STORAGE

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

APPLICATIONS

OC-2 (W-22) is recommended for detection of OC-2 of mouse 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), immunohistochemistry (including paraffin-embedded sections) (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 OC-2 siRNA (h): sc-61254, OC-2 siRNA (m): sc-61255, OC-2 shRNA Plasmid (h): sc-61254-SH, OC-2 shRNA Plasmid (m): sc-61255-SH, OC-2 shRNA (h) Lentiviral Particles: sc-61254-V and OC-2 shRNA (m) Lentiviral Particles: sc-61255-V.

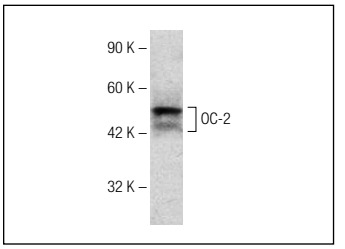
Molecular Weight of OC-2: 58 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



OC-2 (W-22): sc-133862. Western blot analysis of OC-2 expression in Jurkat whole cell lysate.

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.