

OC-3 (W-23): sc-133863

BACKGROUND

OC-3 (One cut domain family member 3) is a 494 amino acid nuclear protein that acts as a transcriptional activator. OC-3 binds the consensus DNA sequence 5'-DHWATTGAYTWWD-3' on a diverse array of gene promoters, such as Prealbumin and HNF-3 β . OC-3 is a member of the ONECUT homeobox family and contains one CUT DNA-binding domain and one homeobox DNA-binding domain. ONECUT proteins regulate gene networks by controlling transcription factor expression and also play an important role in cell metabolism and differentiation. OC-3 shares a significant amount of sequence similarity with OC-1 and OC-2 and is found in upper intestine, stomach and brain in both adult and embryonic mouse. Due to their expression patterns, it is likely that all ONECUT proteins participate in the regulation of organ development from the foregut and midgut endoderm.

REFERENCES

- Jacquemin, P., et al. 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.
- Vanhorenbeeck, V., et al. 2002. OC-3, a novel mammalian member of the ONECUT class of transcription factors. *Biochem. Biophys. Res. Commun.* 292: 848-854.
- Jacquemin, P., et al. 2003. The Onecut transcription factor HNF-6 (OC-1) is required for timely specification of the pancreas and acts upstream of Pdx-1 in the specification cascade. *Dev. Biol.* 258: 105-116.
- Jacquemin, P., et al. 2003. Cloning and embryonic expression pattern of the mouse Onecut transcription factor OC-2. *Gene Expr. Patterns.* 3: 639-644.
- Pierreux, C.E., et al. 2004. The transcription factor hepatocyte nuclear factor-6/Onecut-1 controls the expression of its paralog Onecut-3 in developing mouse endoderm. *J. Biol. Chem.* 279: 51298-51304.
- Vanhorenbeeck, V., et al. 2007. Role of the Onecut transcription factors in pancreas morphogenesis and in pancreatic and enteric endocrine differentiation. *Dev. Biol.* 305: 685-694.
- Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611294: World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Simion, A., et al. 2010. MiR-495 and miR-218 regulate the expression of the Onecut transcription factors HNF-6 and OC-2. *Biochem. Biophys. Res. Commun.* 391: 293-298.
- Francius, C., et al. 2010. Dynamic expression of the Onecut transcription factors HNF-6, OC-2 and OC-3 during spinal motor neuron development. *Neuroscience* 165: 116-129.

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.

CHROMOSOMAL LOCATION

Genetic locus: ONECUT3 (human) mapping to 19p13.3.

SOURCE

OC-3 (W-23) is a Protein A purified rabbit polyclonal antibody raised against synthetic OC-3 peptide of human origin.

PRODUCT

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

APPLICATIONS

OC-3 (W-23) is recommended for detection of OC-3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for OC-3 siRNA (h): sc-97831, OC-3 shRNA Plasmid (h): sc-97831-SH and OC-3 shRNA (h) Lentiviral Particles: sc-97831-V.

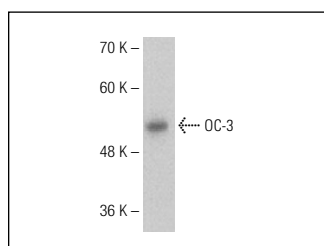
Molecular Weight of OC-3: 50 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

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).

DATA



OC-3 (W-23): sc-133863. Western blot analysis of OC-3 expression in Hep G2 whole cell lysate.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.