SANTA CRUZ BIOTECHNOLOGY, INC.

OSC (G-18): sc-83294

BACKGROUND

OSC, also known as LSS (lanosterol synthase), is a 732 amino acid protein that contains four PFTB repeats and belongs to the terpene cyclase family. Functioning in the pathway of terpene metabolism, OSC catalyzes the first step in the biosynthesis of cholesterol, vitamin D and steroid hormones, namely the conversion of (S)-2,3 oxidosqualene to lanosterol. Lanosterol is a tetracyclic triterpenoid that is required for the synthesis of all steroids. Due to its role in lanosterol production, OSC is crucial for proper cholesterol formation and overall steroid function. Human OSC shares 83% homology with its rat counterpart, suggesting a conserved role between species. Multiple isoforms of OSC exist as a result of alternative splicing events.

REFERENCES

1. Baker, C.H., Matsuda, S.P., Liu, D.R. and Corey, E.J. 1995. Molecular cloning of the human gene encoding lanosterol synthase from a liver cDNA library. Biochem. Biophys. Res. Commun. 213: 154-160.
2. Sung, C.K., Shibuya, M., Sankawa, U. and Ebizuka, Y. 1995. Molecular cloning of cDNA encoding human lanosterol synthase. Biol. Pharm. Bull. 18: 1459-1461.

CHROMOSOMAL LOCATION

Genetic locus: LSS (human) mapping to 21q22.3; Lss (mouse) mapping to 10 C1.

SOURCE

OSC (G-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of OSC of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-83294 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

OSC (G-18) is recommended for detection of OSC 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).

Suitable for use as control antibody for OSC siRNA (h): sc-91491, OSC siRNA (m): sc-151329, OSC shRNA Plasmid (h): sc-91491-SH, OSC shRNA Plasmid (m): sc-151329-SH, OSC shRNA (h) Lentiviral Particles: sc-91491-V and OSC shRNA (m) Lentiviral Particles: sc-151329-V.

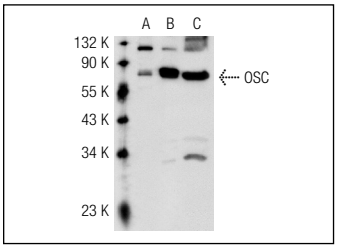
Molecular Weight of OSC: 83 kDa.

Positive Controls: OSC (h): 293T Lysate: sc-115371, OSC (h3): 293T Lysate: sc-170591 or HeLa whole cell lysate: sc-2200.

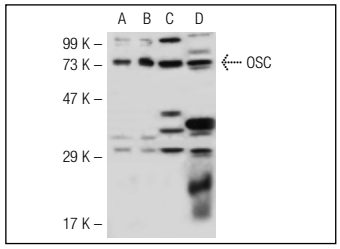
RECOMMENDED SECONDARY REAGENTS

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.

DATA



OSC (G-18): sc-83294. Western blot analysis of OSC expression in non-transfected 293T: sc-117752 (**A**), human OSC transfected 293T: sc-170591 (**B**) and HeLa (**C**) whole cell lysates.



OSC (G-18): sc-83294. Western blot analysis of OSC expression in non-transfected 293T: sc-117752 (**A**), human OSC transfected 293T: sc-115371 (**B**) and HeLa (**C**) whole cell lysates and mouse liver tissue extract (**D**).

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.

PROTOCOLS

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