

OBFC2A (C-16): sc-168821

BACKGROUND

The SOSS complex is a multiprotein complex that promotes DNA repair and the G₂/M checkpoint, and functions downstream of the MRN complex. The SOSS complex associates with DNA lesions and influences diverse endpoints in the cellular DNA damage response, including cell-cycle checkpoint activation, recombinational repair and maintenance of genomic stability. A component of the SOSS complex, OBFC2A (oligonucleotide/oligosaccharide-binding fold-containing protein 2A), also known as SSBP2 (SOSS complex subunit B2), is a 204 amino acid protein that acts as a sensor of single-stranded DNA. OBFC2A binds to single-stranded DNA, particularly polypyrimidines, and is also required for efficient homologous recombination-dependent repair of double-strand breaks (DSBs) and ATM-dependent signaling pathways. Localizing to nucleus, OBFC2A is also found at nuclear foci following DNA damage.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607389. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/607389>
2. Liang, H., et al. 2005. SSBP2, a candidate tumor suppressor gene, induces growth arrest and differentiation of myeloid leukemia cells. *Oncogene* 24: 2625-2634.
3. Xu, Z., et al. 2007. Single-stranded DNA-binding proteins regulate the abundance of LIM domain and LIM domain-binding proteins. *Genes Dev.* 21: 942-955.
4. Liu, J.W., et al. 2008. ssDNA-binding protein 2 is frequently hypermethylated and suppresses cell growth in human prostate cancer. *Clin. Cancer Res.* 14: 3754-3760.
5. Richard, D.J., et al. 2008. Single-stranded DNA-binding protein hSSB1 is critical for genomic stability. *Nature* 453: 677-681.

CHROMOSOMAL LOCATION

Genetic locus: OBFC2A (human) mapping to 2q32.3; Obfc2a (mouse) mapping to 1 C1.1.

SOURCE

OBFC2A (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of OBFC2A 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-168821 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-168821 X, 200 µg/0.1 ml.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

OBFC2A (C-16) is recommended for detection of OBFC2A 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); non cross-reactive with OBFC2B.

OBFC2A (C-16) is also recommended for detection of OBFC2A in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for OBFC2A siRNA (h): sc-94332, OBFC2A siRNA (m): sc-150160, OBFC2A shRNA Plasmid (h): sc-94332-SH, OBFC2A shRNA Plasmid (m): sc-150160-SH, OBFC2A shRNA (h) Lentiviral Particles: sc-94332-V and OBFC2A shRNA (m) Lentiviral Particles: sc-150160-V.

OBFC2A (C-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

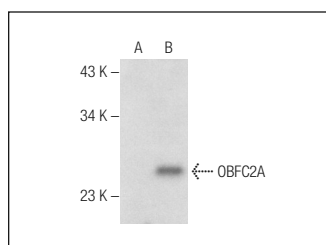
Molecular Weight of OBFC2A isoforms 1/2/3: 22/14/15 kDa.

Positive Controls: OBFC2A (m): 293T Lysate: sc-122213.

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



OBFC2A (C-16): sc-168821. Western blot analysis of OBFC2A expression in non-transfected: sc-117752 (A) and mouse OBFC2A transfected: sc-122213 (B) 293T whole cell lysates.

STORAGE

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