

OBFC1 (A-6): sc-374178

BACKGROUND

The oligonucleotide/oligosaccharide-binding (OB) domain is a dense structural motif normally used for nucleic acid recognition. Proteins containing an OB motif are structurally characterized by a small β -barrel fold formed from several strands connected by modulating loops that recognize either single-stranded or unusually structured nucleic acids. The OB-fold core is extremely variable in length and in functional detail, and members of the OB-fold domain family have a low degree of sequence similarity. However, certain features of ligand binding are conserved among OB-fold complexes. OB-fold proteins are critical for DNA replication, DNA recombination, DNA repair, transcription, translation, cold shock response and telomere maintenance. OBFC1 (oligonucleotide/oligosaccharide-binding fold containing 1) is a 368 amino acid protein that may bind nucleic acids or oligosaccharides. Two isoforms of OBFC1 may exist due to alternative splicing.

REFERENCES

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- Agrawal, V. and Kishan, R.K. 2001. Functional evolution of two subtly different (similar) folds. *BMC Struct. Biol.* 1: 5.
- Bochkareva, E., et al. 2002. Structure of the RPA trimerization core and its role in the multistep DNA-binding mechanism of RPA. *EMBO J.* 21: 1855-1863.
- Martinez Del Pozo, A., et al. 2002. The antifungal protein AFP of *Aspergillus giganteus* is an oligonucleotide/oligosaccharide binding (OB) fold-containing protein that produces condensation of DNA. *J. Biol. Chem.* 277: 46179-46183.
- Mitton-Fry, R.M., et al. 2002. Conserved structure for single-stranded telomeric DNA recognition. *Science* 296: 145-147.
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- Kerr, I.D., et al. 2003. Insights into ssDNA recognition by the OB fold from a structural and thermodynamic study of *Sulfolobus* SSB protein. *EMBO J.* 22: 2561-2570.
- Ginalski, K., et al. 2004. BOF: a novel family of bacterial OB-fold proteins. *FEBS Lett.* 567: 297-301.

CHROMOSOMAL LOCATION

Genetic locus: OBFC1 (human) mapping to 10q24.33.

SOURCE

OBFC1 (A-6) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of OBFC1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

OBFC1 (A-6) is recommended for detection of OBFC1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 OBFC1 siRNA (h): sc-90707, OBFC1 shRNA Plasmid (h): sc-90707-SH and OBFC1 shRNA (h) Lentiviral Particles: sc-90707-V.

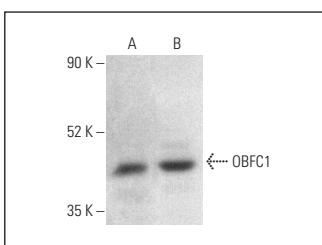
Molecular Weight of OBFC1: 42 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, PANC-1 whole cell lysate: sc-364380 or RT-4 whole cell lysate: sc-364257.

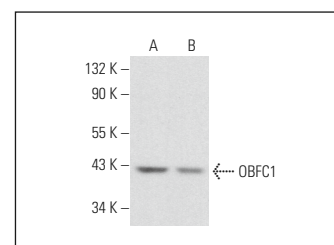
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



OBFC1 (A-6): sc-374178. Western blot analysis of OBFC1 expression in RT-4 (A) and Jurkat (B) whole cell lysates. Detection reagent used: m-IgG₁ BP-HRP: sc-525408.



OBFC1 (A-6): sc-374178. Western blot analysis of OBFC1 expression in Jurkat (A) and PANC-1 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Yu, E.Y., et al. 2021. Reciprocal impacts of telomerase activity and ADRN/MES differentiation state in neuroblastoma tumor biology. *Commun. Biol.* 4: 1315.

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.