

OBFC1 (E-10): sc-376450

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.

CHROMOSOMAL LOCATION

Genetic locus: OBFC1 (human) mapping to 10q24.33; Obfc1 (mouse) mapping to 19 D1.

SOURCE

OBFC1 (E-10) is a mouse monoclonal antibody raised against amino acids 8-307 mapping at the N-terminus of OBFC1 of mouse 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.

OBFC1 (E-10) is available conjugated to agarose (sc-376450 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376450 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376450 PE), fluorescein (sc-376450 FITC), Alexa Fluor® 488 (sc-376450 AF488), Alexa Fluor® 546 (sc-376450 AF546), Alexa Fluor® 594 (sc-376450 AF594) or Alexa Fluor® 647 (sc-376450 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376450 AF680) or Alexa Fluor® 790 (sc-376450 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

OBFC1 (E-10) is recommended for detection of OBFC1 of mouse, rat and 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 siRNA (m): sc-150159, OBFC1 shRNA Plasmid (h): sc-90707-SH, OBFC1 shRNA Plasmid (m): sc-150159-SH, OBFC1 shRNA (h) Lentiviral Particles: sc-90707-V and OBFC1 shRNA (m) Lentiviral Particles: sc-150159-V.

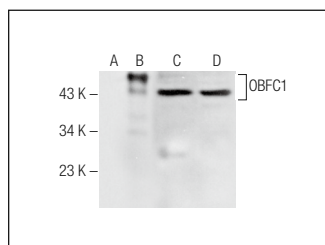
Molecular Weight of OBFC1: 42 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, 3611-RF whole cell lysate: sc-2215 or OBFC1 (m): 293T Lysate: sc-122212.

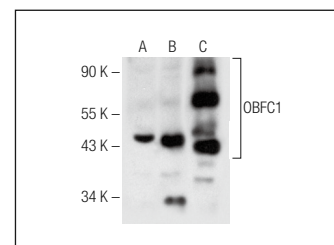
RECOMMENDED SUPPORT REAGENTS

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 (E-10): sc-376450. Western blot analysis of OBFC1 expression in non-transfected: sc-117752 (A) and mouse OBFC1 transfected: sc-122212 (B) 293T whole cell lysates and mouse spleen (C) and mouse testis (D) tissue extracts.



OBFC1 (E-10): sc-376450. Western blot analysis of OBFC1 expression in Jurkat (A) and 3611-RF (B) whole cell lysates and mouse embryo tissue extract (C).

SELECT PRODUCT CITATIONS

- Kratz, K. and de Lange, T. 2018. Protection of telomeres 1 proteins POT1a and POT1b can repress ATR signaling by RPA exclusion, but binding to CST limits ATR repression by POT1b. *J. Biol. Chem.* 293: 14384-14392.
- Mirman, Z., et al. 2018. 53BP1-RIF1-shieldin counteracts DSB resection through CST- and Pol α -dependent fill-in. *Nature* 560: 112-116.
- Schimmel, J., et al. 2021. Small tandem DNA duplications result from CST-guided Pol α -primase action at DNA break termini. *Nat. Commun.* 12: 4843.
- Mirman, Z., et al. 2022. Expression of BRCA1, BRCA2, Rad51, and other DSB repair factors is regulated by CRL4^{WDR70}. *DNA Repair* 113: 103320.
- Nguyen, D.D., et al. 2023. Deficiency in mammalian STN1 promotes colon cancer development via inhibiting DNA repair. *Sci. Adv.* 9: eadd8023.
- Muthumalage, T., et al. 2024. Club cell-specific telomere protection protein 1 (TPP1) protects against tobacco smoke-induced lung inflammation, xenobiotic metabolic dysregulation, and injurious responses. *FASEB Bioadv.* 6: 53-71.

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.