SANTA CRUZ BIOTECHNOLOGY, INC.

ORC6 (D-4): sc-390490

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The initiation of DNA replication is a multi-step process that depends on the formation of pre-replication complexes, which trigger initiation. Among the proteins required for establishing these complexes are the origin recognition complex (ORC) proteins. ORC proteins bind specifically to origins of replication where they serve as scaffold for the assembly of additional initiation factors. Human ORC subunits 1-6 are expressed in the nucleus of proliferating cells and tissues, such as the testis. ORC1 and ORC2 are both expressed at equivalent concentrations throughout the cell cycle; however, only ORC2 remains stably bound to chromatin. ORC4 and ORC6 are also expressed constantly throughout the cell cycle. ORC2, ORC3, ORC4 and ORC5 form a core complex upon which ORC6 and ORC1 assemble. The formation of this core complex suggests that ORC proteins play a crucial role in the G_1-S transition in mammalian cells.

REFERENCES

1. Quintana, D.G., et al. 1997. Identification of the HsORC4, a member of the human origin of replication recognition complex. J. Biol. Chem. 272: 28247-28251.
2. Mendez, J. and Stillman, B. 2000. Chromatin association of human origin recognition complex, Cdc6, and minichromosome maintenance proteins during the cell cycle: assembly of prereplication complexes in late mitosis. Mol. Cell. Biol. 20: 8602-8612.

CHROMOSOMAL LOCATION

Genetic locus: ORC6 (human) mapping to 16q11.2; Orc6 (mouse) mapping to 8 C3.

SOURCE

ORC6 (D-4) is a mouse monoclonal antibody raised against amino acids 1-252 representing full length ORC6 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

ORC6 (D-4) is recommended for detection of ORC6 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 ORC6 siRNA (h): sc-38161, ORC6 siRNA (m): sc-38162, ORC6 shRNA Plasmid (h): sc-38161-SH, ORC6 shRNA Plasmid (m): sc-38162-SH, ORC6 shRNA (h) Lentiviral Particles: sc-38161-V and ORC6 shRNA (m) Lentiviral Particles: sc-38162-V.

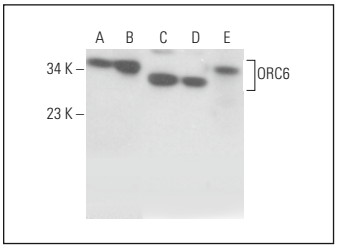
Molecular Weight of ORC6: 30 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HEL 92.1.7 cell lysate: sc-2270 or HeLa whole cell lysate: sc-2200.

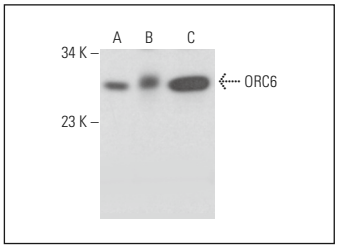
RECOMMENDED SUPPORT REAGENTS

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



ORC6 (D-4): sc-390490. Western blot analysis of ORC6 expression in HeLa (**A**), Jurkat (**B**), MES-SA/Dx5 (**C**) and NCI-H929 (**D**) whole cell lysates and human tonsil tissue extract (**E**).



ORC6 (D-4): sc-390490. Western blot analysis of ORC6 expression in HeLa (**A**), HEL 92.1.7 (**B**) and K-562 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Lei, T., et al. 2018. Cyclin K regulates prereplicative complex assembly to promote mammalian cell proliferation. Nat. Commun. 9: 1876.
2. Oldfield, A.J., et al. 2019. NF-Y controls fidelity of transcription initiation at gene promoters through maintenance of the nucleosome-depleted region. Nat. Commun. 10: 3072.

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 for detailed protocols and support products.