

ORC1 (N-17): sc-13231

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 G₁-S transition in mammalian cells.

CHROMOSOMAL LOCATION

Genetic locus: ORC1L (human) mapping to 1p32.3; Orc1l (mouse) mapping to 4 C7.

SOURCE

ORC1 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ORC1 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-13231 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-13231 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ORC1 (N-17) is recommended for detection of ORC1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ORC1 (N-17) is also recommended for detection of ORC1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for ORC1 siRNA (h): sc-38151, ORC1 siRNA (m): sc-38152, ORC1 shRNA Plasmid (h): sc-38151-SH, ORC1 shRNA Plasmid (m): sc-38152-SH, ORC1 shRNA (h) Lentiviral Particles: sc-38151-V and ORC1 shRNA (m) Lentiviral Particles: sc-38152-V.

ORC1 (N-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

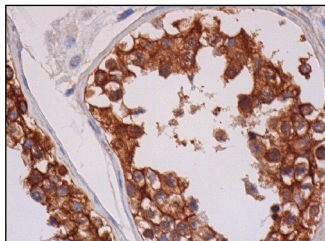
Molecular Weight of ORC1: 120 kDa.

Positive Controls: ramos nuclear extract: sc-2153 or NIH/3T3 whole cell lysate: sc-2210.

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) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



ORC1 (N-17): sc-13231. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic, membrane and nuclear staining of cells in seminiferous ducts.

SELECT PRODUCT CITATIONS

- Kinoshita, Y., et al. 2004. Site-specific loading of an MCM protein complex in a DNA replication initiation zone upstream of the c-MYC gene in the HeLa cell cycle. *J. Biol. Chem.* 279: 35879-35889.
- Cohen, S.M., et al. 2009. DNA replication and the GINS complex: localization on extended chromatin fibers. *Epigenetics Chromatin* 2: 6.

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.



Try **ORC1 (F-10): sc-398734** or **ORC1 (7A7): sc-23887**, our highly recommended monoclonal alternatives to ORC1 (N-17).