

ORC2 (H-300): sc-28742

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 SOURCE

Genetic locus: ORC2L (human) mapping to 2q33.1; Orc2l (mouse) mapping to 1 C1.3.

SOURCE

ORC2 (H-300) is a rabbit polyclonal antibody raised against amino acids 278-577 mapping at the C-terminus of ORC2 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-28742 X, 200 µg/0.1 ml.

RESEARCH USE

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

APPLICATIONS

ORC2 (H-300) is recommended for detection of ORC2 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).

ORC2 (H-300) is also recommended for detection of ORC2 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for ORC2 siRNA (h): sc-38153, ORC2 siRNA (m): sc-38154, ORC2 shRNA Plasmid (h): sc-38153-SH, ORC2 shRNA Plasmid (m): sc-38154-SH, ORC2 shRNA (h) Lentiviral Particles: sc-38153-V and ORC2 shRNA (m) Lentiviral Particles: sc-38154-V.

ORC2 (H-300) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

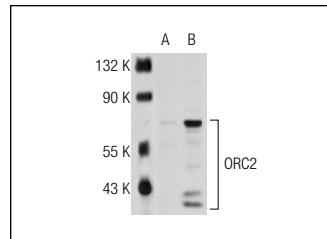
Molecular Weight of ORC2: 70 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, U-2 OS cell lysate: sc-2295 or ORC2 (h): 293T Lysate: sc-113531.

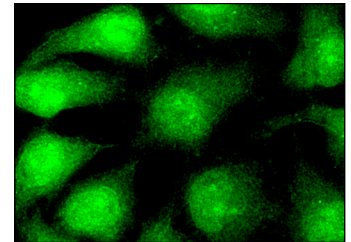
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ORC2 (H-300): sc-28742. Western blot analysis of ORC2 expression in non-transfected: sc-117752 (A) and human ORC2 transfected: sc-113531 (B) 293T whole cell lysates.



ORC2 (H-300): sc-28742. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

- Rampakakis, E., et al. 2008. Ku is involved in cell growth, DNA replication and G₁-S transition. *J. Cell Sci.* 121: 590-600.
- Bourgo, R.J., et al. 2011. RB deletion disrupts coordination between DNA replication licensing and mitotic entry *in vivo*. *Mol. Biol. Cell* 22: 931-939.
- Verma, S.C., et al. 2011. Single molecule analysis of replicated DNA reveals the usage of multiple KSHV genome regions for latent replication. *PLoS Pathog.* 7: e1002365.
- Yasuda, A., et al. 2011. DNA ligand designed to antagonize EBNA1 represses Epstein-Barr virus-induced immortalization. *Cancer Sci.* 102: 2221-2230.
- Ogiwara, H. and Kohno, T. 2012. CBP and p300 histone acetyltransferases contribute to homologous recombination by transcriptionally activating the BRCA1 and RAD51 genes. *PLoS ONE* 7: e52810.

STORAGE

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


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Try **ORC2 (3G6): sc-32734**, our highly recommended monoclonal alternative to ORC2 (H-300).