SANTA CRUZ BIOTECHNOLOGY, INC.

ORC6 (h2): 293T Lysate: sc-116694

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 the ORC6 and ORC1 assemble. The formation of this core complex suggests 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.
3. Dhar, S.K. and Dutta, A. 2000. Identification and characterization of the human ORC6 homolog. J. Biol. Chem. 275: 34983-34988.
4. Thome, K.C., et al. 2000. Subsets of human origin recognition complex (ORC) subunits are expressed in non-proliferating cells and associate with non-ORC proteins. J. Biol. Chem. 275: 35233-35241.
5. Kreitz, S., et al. 2000. The human origin-recognition-complex protein 1 dissociates from chromatin during S phase in HeLa cells. J. Biol. Chem. 276: 6337-6342.
6. Natale, D.A., et al. 2000. Selective instability of Orc1 protein accounts for the absence of functional origin recognition complexes during the M-G_1 transition in mammals. EMBO J. 19: 2728-2738.
7. Vashee, S., et al. 2001. Assembly of the human origin recognition complex. J. Biol. Chem. 276: 26666-26673.

CHROMOSOMAL LOCATION

Genetic locus: ORC6L (human) mapping to 16q11.2.

PRODUCT

ORC6 (h2): 293T Lysate represents a lysate of human ORC6 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

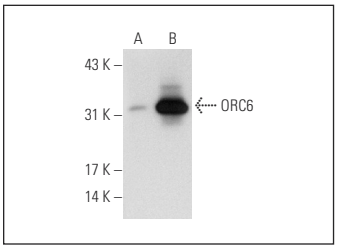
APPLICATIONS

ORC6 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive ORC6 antibodies. Recommended use: 10-20 µl per lane.

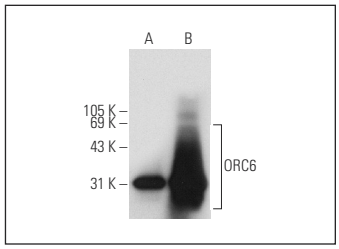
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

ORC6 (2679C2b): sc-81646 is recommended as a positive control antibody for Western Blot analysis of enhanced human ORC6 expression in ORC6 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

DATA



ORC6 (2679C2b): sc-81646. Western blot analysis of ORC6 expression in non-transfected: sc-117752 (**A**) and human ORC6 transfected: sc-116694 (**B**) 293T whole cell lysates.



ORC6 (3A4): sc-32735. Western blot analysis of ORC6 expression in non-transfected: sc-117752 (**A**) and human ORC6 transfected: sc-116694 (**B**) 293T whole cell lysates.

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.